

**SECTION 01100**

**PART I GENERAL**

**SUMMARY**

**1.1 SUMMARY**

**A. Section includes:**

1. Summary of Work and Work Restrictions including:
  - a. Work Covered By Contract Documents
  - b. Bid Item, Allowances and Alternates
  - c. Work Under Other Contracts
  - d. Future Work
  - e. Work Sequence
  - f. Work Days and Hours
  - g. Shutdown for Discovery of Cultural Resources
  - h. Cooperation of Contractor and Coordination with Other Work
  - i. Partial Occupancy/Utilization Requirements
  - j. Contractor Use of Site
  - k. Air Quality Standards
  - l. Construction Staking and Monument Protection
  - m. Protection of Existing Structures and Underground Facilities
  - n. Permits
  - o. City-Furnished Products

**1.2 WORK COVERED BY CONTRACT DOCUMENTS**

- A. Work comprises of the construction of the City of San Bruno Belle Air Storm Drainage Improvements located at 5<sup>th</sup> Avenue between Angus Avenue and 7<sup>th</sup> Avenue, San Bruno, California, 94066. The Work generally includes, without limitation, the installation of a new trench drain system and replacement of asphalt concrete pavement section and PCC curb, gutter, sidewalk and driveway. The Contract Documents fully describe the Work.
- B. The Work of this Contract comprises construction of all the Work indicated, described in the Specifications, or otherwise required by the Contract Documents.
- C. Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by Contract Documents shall rest with Contractor until Final Acceptance of the Work.
- D. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices Bid and no direct or additional payment will be made therefor.

**1.3 BID ITEMS, ALLOWANCES AND ALTERNATES**

- A. Any Bid item may be deleted from the Work and Contract Sum, in total or in part, prior to or after award of Contract without compensation in any form or adjustment of other Bid items or prices therefore.
- B. Payment of all items is subject to provisions of Contract Documents, including without limitation Section 01200 (Price and Payment Procedures).
- C. For all Bid items, furnish and install all Work, including connections to existing systems, indicated and described in Specifications and all other Contract Documents. Work and requirements applicable to each individual Bid item, or unit of Work, shall be deemed incorporated into the description of each Bid item (whether Lump Sum or Unit Price).

D. Descriptions of Lump Sum Items (listed by Bid item numbers):

1. Public Notification – includes but is not limited to providing and installing project information signs; establishing and implementing a procedure to provide various written construction notices (handouts and/or mailings) to affected properties including door-to-door notification and documentation that required noticing has been accomplished.
2. Demolition – includes but is not limited to sawcutting and/or grinding, removal, hauling and legal disposal of Portland cement concrete, asphalt concrete and aggregate base materials, tree roots, soils and earth, securing a dump site, protecting existing facilities, repairing facilities damaged by demolition operations, recycling of materials and all other aspects as shown on the Plans, as specified herein, and as directed by the Engineer.

E. Descriptions of Unit Price Items and Basis of Measurement for Payment (listed by Bid item numbers):

3. Potholing – Measurement and payment for Potholing shall be per each including but not limited to excavation, disposal of excavated materials, backfill and compaction of the pothole, and recording location information.
4. Trench Drain System – Measurement and payment for trench drain system shall be on a linear foot basis including but not limited to preparing submittal documents; earthwork; layout (horizontal and vertical) of the approved system for construction purposes; furnishing and installing an operational system complete in place, portland cement concrete surround, dowels, expansion joints, connection to ex SDI's, testing, protection and cleanup.
5. PCC Curb and Gutter – Measurement and payment for PCC Curb and Gutter shall be on a linear foot basis (including placement across PCC driveways) including but not limited to furnishing all labor, materials, tools, equipment, transportation, and incidentals, and for doing all the work as shown on the plans, as specified herein, and as directed by the Engineer including but not limited to preparing and providing submittals, earthwork, subgrade preparation, premolded joint filler, expansion joints with sealant, scoring, finishing, lampblack, form board installation and removal, dowels, aggregate base cushion material, curing, sprinkler system repair and protection, sod replacement, and removing and replacing cracked and/or defaced concrete or concrete rejected for any other reason.
6. PCC Sidewalk – Measurement and payment for PCC Sidewalk shall be on a square foot basis including but not limited to furnish all labor, materials, tools, equipment, transportation, and incidentals, and for doing all the work as shown on the plans, as specified herein, and as directed by the Engineer including but not limited to preparing and providing submittals, earthwork, subgrade preparation, premolded joint filler, expansion joints with sealant, scoring, finishing, lampblack, form board installation and removal, dowels, aggregate base cushion material, curing, sprinkler system repair and protection, sod replacement, and removing and replacing cracked and/or defaced concrete or concrete rejected for any other reason.
7. PCC Driveway – Measurement and payment for PCC Driveway shall be on a square foot basis (not including curb and gutter) including but not limited to furnish all labor, materials, tools, equipment, transportation, and incidentals, and for doing all the work as shown on the plans, as specified herein, and as directed by the Engineer including but not limited to preparing and providing submittals, earthwork, subgrade preparation, premolded joint filler, expansion joints with sealant, scoring, finishing, lampblack, form board installation and removal, dowels, aggregate base cushion material, curing, sprinkler system repair and protection, sod replacement, and removing and replacing cracked and/or defaced concrete or concrete rejected for any other reason.
8. 5" AC on 12" AB Pavement Reconstruction – Measurement and payment for asphalt concrete and aggregate base pavement reconstruction shall be on a square foot basis including but not limited to all labor, materials, tools, equipment and incidental and for doing all work as shown on plans as specified herein, or as directed by the Engineer including compaction testing, placement and compaction of new asphalt concrete and aggregate base materials, earthwork, compaction of existing subgrade materials, tack coat, prime coat and geotextile fabric.
9. Asphalt Concrete Conforms – Measurement and payment for asphalt concrete conforms shall be on a linear foot basis including but not limited to furnishing, placing and compaction asphalt concrete five (5) inches in depth and twelve (12) inches in width including earthwork, compaction of existing subgrade materials, tack coat, prime coat and compaction testing.
10. Overexcavation – Overexcavation shall be a contingent bid item and if utilized shall be measured and paid for on a cubic yard basis including but not limited to earthwork, providing and installing drain

filter fabric earthwork, compaction of existing subgrade materials, removal and legal disposal of excavated materials. Unit price bid for Overexcavation listed in the bid form is exempt from the quantity parameters listed in paragraph 1.4 of Section 01200, Price Payment and Procedures.

2.1 Remove Trees – Measurement and payment for Remove Trees shall be per each including but not limited to removal and legal disposal of trees and stumps, chemical treatment of root system, backfill and compaction of voids and placement of new sod on backfilled areas.

**1.4 WORK UNDER OTHER CONTRACTS**

A. None expected

**1.5 FUTURE WORK**

A. None expected

**1.6 WORK SEQUENCE**

A. Construct Work in stages and at times to accommodate City operation requirements during the construction period; coordinate construction schedule and operations with City.

**1.7 WORK DAYS AND HOURS**

A. Work Days and hours: Monday-Friday inclusive, 8:00 a.m.-5:00 p.m. local time.

B. Work at the Site on weekends or holidays is not permitted, unless Contractor requests otherwise from City in writing at least 48 hours in advance and City approves in its sole discretion.

C. Contractor will not be permitted to schedule utility shutdowns on Fridays.

**1.8 SHUTDOWN FOR DISCOVERY OF CULTURAL RESOURCES**

A. If discovery is made of items of historical archaeological or paleontological interest, immediately cease all Work in the area of discovery. Archaeological indicators may include, but are not limited to, dwelling sites, locally darkened soils, stone implements or other artifacts, fragments of glass or ceramics, animal bones, human bones, and fossils. After cessation of excavation, immediately contact City. Do not resume Work until authorization is received from City. When resumed, excavation or other activities shall be as directed by City.

**1.9 COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK**

A. Coordinate with City and any City forces, or other contractors and forces, as required by Document 00700 (General Conditions), Paragraph 6.

**1.10 NOT USED**

**1.11 CONTRACTOR USE OF SITE**

A. Confine operations at Site to areas permitted by Contract Documents, permits, ordinances, and laws.

B. Do not unreasonably encumber Site with materials or equipment.

C. Assume full responsibility for protection and safekeeping of products stored on premises.

D. Move any stored products that interfere with operations of City or other contractor.

E. Coordinate parking, storage, staging, and Work areas with City.

- F. Do not store construction materials in the Dripline of any tree.
- G. Access is available to the Site from Angus Avenue and 5<sup>th</sup> Avenue.
- F. Prior to commencement of Work or excavation, Contractor and the City shall jointly survey the area adjacent to the Project area making permanent note and record of such existing damage such as cracks, sags or other similar damage. This record shall serve as a basis for determination of subsequent damage to structures, conditions or other existing improvements due to Contractor's operations. All parties making the survey shall sign the official record of existing damage. Cracks, sags or damage of any nature to the adjacent Project area, not noted in the original survey but subsequently noted, shall be reported immediately to the City.
- K. The Contractor shall follow all city ordinances in force during the duration of this Contract.
- L. Dumpsters shall be removed from the Site before 8:00 a.m. or after 5:00 p.m. on any City business day.
- M. It is essential that the Contractor perform the Work with as little interference and disturbance as possible to the surrounding neighborhood.
- N. Access Request forms shall be submitted 48 hours in advance of anticipated on-site Work to gain permission to enter Site and to allow notification to occupants.
- O. When suspect materials, outside the scope of Work, are encountered during the Work or restoration process, the Contractor shall immediately contact the Project Manager for evaluation and approval of the methods for dealing with the material.

#### 1.12 AIR QUALITY STANDARDS

- A. Ensure that idling time for all heavy equipment is minimized to reduce on-site emissions.
- B. Maintain equipment in good mechanical condition.
- C. Cover trucks hauling dirt.
- D. Limit dust emissions during periods of high winds (greater than 15 miles per hour).
- E. Replace ground cover in disturbed areas as soon as possible.
- F. Enclose, cover, water or apply soil binders to exposed stockpiles.
- G. Remove earth tracked onto neighboring paved roads at least once daily.
- H. Limit equipment speed to 10 miles per hour in unpaved areas.

#### 1.13 CONSTRUCTION STAKING AND MONUMENT PROTECTION

- A. Contractor shall be responsible for construction staking and laying out the Work, and shall protect and preserve the established construction stakes and property monuments, and shall make no changes or relocations without the prior written approval of City. Whenever Contractor knows or reasonably should know that any Work activity is likely to damage or destroy any construction stakes or property monuments, or require relocation because of necessary changes in grades or locations, provide at least 2 Business Days advance notice to City. In any event, notify City whenever any construction stakes or property monuments are lost or destroyed or require relocation because of necessary changes in grades or locations. City shall replace or repair construction stakes or property monuments at Contractor's expense.
- B. Perform brush clearing and traffic control, as necessary, in City's sole judgment.

- C. Illegible survey requests or requests for surveys without proper (at least 3 Business Days) notification, may result in delayed surveys. No extension of Contract Time will be allowed due to such delays.

#### 1.14 PROTECTION OF EXISTING STRUCTURES AND UNDERGROUND FACILITIES

- A. Where overhead service to a structure, known to receive service, does not exist, then underground service shall be assumed to exist.
- B. Attention is also directed to the existence of overhead power, telephone and other utility lines.
- C. Perform pot-holing by hand or vacuum extraction of the Underground Facilities. This may be done on an area-by-area basis, but shall be accomplished at least 7 Days in advance of the date of construction within such area.
- D. No attempt has been made to locate private utilities on private property such as sprinkler irrigation systems or electrical conduits. Contact the property owners prior to construction.
- E. In addition to reporting, if a utility is damaged, Contractor must take appropriate action as provided in Document 00700 (General Conditions).
- F. Additional compensation or extension of time on account of utilities not indicated or otherwise brought to Contractor's attention including reasonable action taken to protect or repair damage shall be determined as provided in Document 00700 (General Conditions).

#### 1.15 PERMITS

- A. A no-fee Encroachment Permit will be issued by the City to the Contractor.

#### 1.16 NOT USED

#### PART 2 PRODUCTS - NOT USED

#### PART 3 EXECUTION – NOT USED

END OF SECTION

**SECTION 01200**

**PRICE AND PAYMENT PROCEDURES**

**PART I GENERAL**

**1.1 SUMMARY**

- A. Section includes description of requirements and procedures for determining amount of Work performed and for obtaining payment for Work performed.

**1.2 REFERENCES**

- A. California Public Contract Code
- B. California Code of Civil Procedures
- C. California Government Code

**1.3 SCOPE OF WORK**

- A. The Contract Sum for performance of the Work under Contract Documents, or under any Bid item, allowance, or Alternate, shall include full compensation for all labor, materials, taxes, transport, handling, storage, supervision, administration, and all other items necessary for the satisfactory completion of the Work, whether or not expressly specified or indicated.

**1.4 DETERMINATION OF QUANTITIES**

- A. Quantity of Work to be paid for under any item for which a unit price is fixed in Contract Documents shall be, as determined by City, number of units of Work satisfactorily completed in accordance with Contract Documents or as directed by City. Unless otherwise provided, determination of number of units of Work so completed will be based, so far as practicable, on actual measurement or count within prescribed or ordered limits, and no payment will be made for Work done outside of limits. Unit Prices shall apply to Work covered by unit prices so long as actual quantities performed on the Project are not less than 75 percent or greater than 125 percent of the estimated quantities contained in Document 00400 (Bid Form) or otherwise referenced in Section 01100 (Summary). If actual quantities exceed these parameters, then the unit price shall be adjusted by an amount to reflect the Contractor's incremental cost differential resulting from increased or decreased economies of scale.

**1.5 BASIS OF PAYMENT**

- A. Unit Price Quantities: When estimated quantity for specific portions of Work is listed in Bid Form, quantity of Work to be paid for shall be actual number of units satisfactorily completed, as determined by City and certified by Contractor, in accordance with Contract Documents.
- B. Lump Sum: When estimated quantity for specific portion of Work is not indicated and Work is designated as lump sum, payment will be on a lump sum basis for Work satisfactorily completed in accordance with Contract Documents.
- C. Allowances: Allowance items (if any) will be paid for as provided in Section 01100 (Summary). Funds authorized for Allowance Work will not be released for Contract payments unless City has authorized Allowance Work in writing. Unused allowance amounts at Contract completion shall reduce the Contract price accordingly.

- D. City does not expressly, or by implication, agree, warrant, or represent in any manner, that actual amount of Work will correspond with amount shown or estimated and reserves right to increase or decrease amount of any class or portion of Work, to delete entire Bid item or items, or to add work not originally included in Bid or Contract Documents, when in its judgment such change is in best interest of City. No change in Work shall be considered a waiver of any other condition of Contract Documents. No claim shall be made for anticipated profit, for loss of profit, for damages, or for extra payment whatever, except as otherwise expressly provided for in Contract Documents, because of any differences between amount of Work actually done and estimated amount as set forth herein, or for elimination of Bid items.

- E. No payment shall be made for materials or equipment not yet incorporated into the Work, except as expressly specified otherwise in Section 01100 (Summary).

**1.6 PROGRESS PAYMENTS**

- A. If requested by Contractor, progress payments will be made monthly.

- B. Schedule of Values:

1. Within ten Days from issuance of Notice of Award and prior to the Contractor's first Application for Payment, Contractor shall submit a detailed breakdown of its Bid by scheduled Work items and/or activities, including coordination responsibilities and Project Record Documents responsibilities. Where more than one Subcontractor comprises the work of a Work item or activity, the Schedule of Values shall show a separate line item for each subcontract. Contractor shall furnish such breakdown of the total Contract Sum by assigning dollar values (cost estimates) to each applicable Progress Schedule network activity, which cumulative sum equals the total Contract Sum. This breakdown shall be referred to as the Schedule of Values.

2. Contractor's overhead, profit, insurance, cost of bonds (except to the extent expressly identified in a Bid item) and/or other financing, as well as "general conditions costs," (e.g., Site cleanup and maintenance, temporary roads and access, off-Site access roads, temporary power and lighting, security, and the like), shall be prorated through all activities so that the sum of all the Schedule of Values line items equals Contractor's total Contract Sum, less any allowances designated by City. Scheduling, record documents and quality assurance control shall be separate line items.

3. City will review the breakdown in conjunction with the Progress Schedule to ensure that the dollar amounts of this Schedule of Values are, in fact, fair market cost allocations for the Work items listed. Upon favorable review by City, City will accept this Schedule of Values for use. City shall be the sole judge of fair market cost allocations.

4. City will reject any attempt to increase the cost of early activities, i.e., "front loading," resulting in a complete reallocation of moneys until such "front loading" is corrected. Repeated attempts at "front loading" may result in suspension or termination of the Work for default, or refusal to process progress payments until such time as the Schedule of Values is acceptable to City.

- C. Monthly Report Sheets and Applications for Payment: Contractor shall establish and maintain records of cost of the Work in accordance with generally accepted accounting practices, reconcile the amount of Work completed monthly with City, and sign City's monthly report sheet certifying to the Work done. Monthly report sheets shall be considered the true record of the Cost of the Work and Contractor shall submit in a form acceptable to City an itemized cost breakdown of Contractor's record of Cost of the Work together with supporting data and any certification required by City. In addition:

1. On or before the sooner of (a) the 20<sup>th</sup> Day of each month and (b) receipt of City's approval of the updated Schedule as required by Section 01320 (Progress Schedules and Reports), Contractor shall submit to City two copies of an Application for Payment for the cost of the Work put in place during the period from the 15<sup>th</sup> Day of the previous month to the 15<sup>th</sup> Day of the current month, along with one copy of the City-approved updated Schedule. Such Applications for Payment shall be for the total value of activities completed or partially completed, based upon Schedule of Values prices (or Bid item prices if unit price) of all labor and materials incorporated in the Work up until midnight of the last Day of that one month period, less the aggregate of previous payments. Accumulated retainage shall be shown as separate item in payment summary.

2. City and Contractor will reconcile any differences in the field, based on the reconciled monthly report sheets. If Contractor is late submitting its Application for Payment, that Application may be processed at any time during the succeeding one-month period, resulting in processing of Contractor's Application for Payment being delayed for more than a Day for Day basis. Except as otherwise provided in a labor compliance program applicable to the Work (if any) or as otherwise required by City, concurrently with each Application for Payment, Contractor shall submit to the City the Contractor's and its Subcontractors' certified payroll records required to be maintained pursuant to Labor Code Section 1776 for all labor performed during pay periods ending during the period covered by the Application for Payment.
3. No progress payment will be processed prior to City receiving all requested, acceptable schedule update information and certified payrolls. Failure to submit a schedule update complying with Section 01320 (Progress Schedules and Reports) and certified payrolls complying with Labor Code Section 1776, justifies denying the entire Application for Payment in City's sole and absolute discretion.
4. Each Application for Payment shall list each Change Order and Construction Change Directive ("CCD") executed prior to date of submission, including the Change Order/CCD Number, and a description of the Work activities, consistent with the descriptions of original Work activities. Contractor shall submit a monthly Change Order/CCD status log to City.
5. If City requires substantiating data, Contractor shall submit information requested by City, with cover letter identifying Project, Application for Payment number and date, and detailed list of enclosures. Contractor shall submit one copy of substantiating data and cover letter for each copy of Application for Payment submitted.
6. If Contractor fails or refuses to participate in monthly Work reconciliations or other construction progress evaluation with City, Contractor shall not receive current payment until Contractor has participated fully in providing construction progress information and schedule update information to City.

D. Progress Payments

1. City will review Contractor's Application for Payment following receipt. If adjustments need to be made to percent of completion of each activity, City will make appropriate notations and return to Contractor. Contractor shall revise and resubmit. All parties shall update percentage of completion values in the same manner, i.e., express value of an accumulated percentage of completion to date.
2. If City determines that portions of the Application for Payment are not proper or not due under the Contract Documents, then City may approve the other portions of the Application for Payment, and in the case of disputed items or Defective Work not remedied, may withhold up to 150 percent of the disputed amount from the progress payment.
3. Pursuant to California Public Contract Code §20104.50, if City fails to make any progress payment within 30 Days after receipt of an undisputed and properly submitted Application for Payment from Contractor, City shall pay interest to the Contractor equivalent to the legal rates set forth in subdivision (a) of Section 685.010 of the California Code of Civil Procedure. The 30-Day period shall be reduced by the number of Days by which City exceeds the seven-Day return requirement set forth herein.
4. As soon as practicable after approval of each Application for Payment for progress payments, City will pay to Contractor in manner provided by law, an amount equal to 90 percent of the amounts otherwise due as provided in the Contract Documents, or a lesser amount if so provided in Contract Documents, provided that payments may at any time be withheld if, in judgment of City, Work is not proceeding in accordance with Contract, or Contractor is not complying with requirements of Contract, or to comply with stop notices or to offset liquidated damages accruing or expected.
5. Before any progress payment or final payment is due or made, Contractor shall submit satisfactory evidence that Contractor is not delinquent in payments to employees, Subcontractors, suppliers, or creditors for labor and materials incorporated into Work. This specifically includes, without limitation, conditional lien release forms for the current progress payment and unconditional release forms for past progress payments. This also includes copies of certified payroll from contractor and subcontractors for the current payment period.



**1.7 FINAL PAYMENT**

- A. As soon as practicable after all required Work is completed in accordance with Contract Documents, including punchlist, testing, record documents and Contractor maintenance after Final Acceptance, City will pay to Contractor, in manner provided by law, unpaid balance of Contract Sum of Work (including, without limitation, retentions), or whole Contract Sum of Work if no progress payment has been made, determined in accordance with terms of Contract Documents, less sums as may be lawfully retained under any provisions of Contract Documents or by law.
- B. Prior progress payments and change orders shall be subject to audit and correction in the final payment. City's determination of amount due as final payment shall be final and conclusive evidence of amount of Work performed by Contractor under Contract Documents and shall be full measure of compensation to be received by Contractor.
- C. Contractor and each assignee under an assignment in effect at time of final payment shall execute and deliver at time of final payment, and as a condition precedent to final payment, Document 00650 (Agreement and Release of Any and All Claims).

**PART 2 PRODUCTS – NOT USED**

**PART 3 EXECUTION – NOT USED**

END OF SECTION

SECTION 01250

MODIFICATION PROCEDURES

PART I GENERAL

1.1 GENERAL

A. Only Contractor or City may initiate changes in scope of Work or deviation from Contract Documents.

1. Contractor may initiate changes by submitting a Request for Information (RFI), Notice of Concealed or Unknown Conditions, or Notice of Hazardous Waste Conditions.
  - a. RFIs shall be submitted to seek clarification of or request changes in the Contract Documents.
  - b. Notices of Concealed or Unknown Conditions shall be submitted in accordance with Document 00700 (General Conditions).
  - c. Notices of Hazardous Waste Conditions shall be submitted in accordance with Document 00700 (General Conditions).
2. City may initiate changes by issuing a Supplemental Instruction, which may revise, add to or subtract from the Work.
3. City may initiate changes in the Work or Contract Time by issuing RFPs to Contractor. Such RFPs will detail all proposed changes in the Work and request a quotation of changes in Contract Sum and Contract Time from Contractor.
4. City may also, by Construction Change Directive ("CCD"), order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions; the Contract Sum and Contract Time being adjusted accordingly. A CCD shall be used in the absence of total agreement on the terms of a Change Order and may, upon notice, consist of a Change Order executed by City only.

1.2 PROCEDURES

A. **Cost Proposal and Procedures:** Whenever Contractor is required in this Section 01250 to prepare a Cost Proposal, and whenever Contractor is entitled to submit a Cost Proposal and elects to do so, Contractor shall prepare and submit to City for consideration a Cost Proposal using the form attached to this Section 01250. All Cost Proposals must contain a complete breakdown of actual, current costs of credits, deducts, and extras; and itemizing materials, labor, taxes, overhead and profit. All Subcontractor Work shall be so indicated. Individual entries on the Cost Proposal form shall be determined as provided in this Section 01250. After receipt of a Cost Proposal with a detailed breakdown, City will act promptly thereon.

1. If City accepts a Cost Proposal, City will prepare Change Order for City and Contractor signatures.
2. If Cost Proposal is not acceptable to City because it does not agree with cost and/or time included in Cost Proposal, City will submit in a response what it believes to be a reasonable cost and/or adjustment, if any. Except as otherwise provided in this Section 01250, Contractor shall have seven Days in which to respond to City with a revised Cost Proposal.
3. When necessity to proceed with a change does not allow the City sufficient time to conduct a proper check of a Cost Proposal (or revised Cost Proposal), City may order Contractor to proceed on basis to be determined at earliest practical date. In this event, value of change, with corresponding equitable adjustment to Contract, shall not be more than increase or less than decrease proposed.

B. **Request for Information:** Whenever Contractor requires information regarding the Project or Contract Documents, or receives a request for information from a Subcontractor, Contractor may prepare and deliver an RFI to City. Contractor shall use RFI format provided by City. Contractor must submit time critical RFIs at least 30 Days before scheduled start date of the affected Work activity. Contractor shall reference each RFI to an activity of Progress Schedule and shall note time criticality of the RFI, indicating time

within which a response is required. Contractor's failure to reference RFI to an activity on the Progress Schedule and note time critically on the RFI shall constitute Contractor's waiver of any claim for time delay or interruption to the Work resulting from any delay in responding to the RFI.

1. City will respond within seven Days from receipt of RFI with a written response to Contractor. Contractor shall distribute response to all appropriate Subcontractors.
2. If Contractor is satisfied with the response and does not request a change in Contract Sum or Contract Time, then the response shall be executed without a change.
3. If Contractor believes the response is incomplete, Contractor shall issue another RFI (with the same RFI number with the letter "A" indicating if it is a follow-up RFI) to City clarifying original RFI. Additionally, City may return RFI requesting additional information should original RFI be inadequate in describing condition.
4. If Contractor believes that the response results in change in Contract Sum or Contract Time, Contractor shall notify City in writing within seven Days after receiving the response. If City disagrees with Contractor, then Contractor may give notice of intent to submit a Claim as described in Article 12 of Document 00700 (General Conditions), and submit its Claim within 30 Days. If City agrees with Contractor, then Contractor must submit a Cost Proposal within 7 Days of receiving the response to the RFI. Contractor's failure to deliver either the foregoing notice and Claim or Cost Proposal by the respective deadlines stated in the foregoing sentences shall result in waiver of the right to file a Cost Proposal or Claim.

**C. Supplemental Instruction:** City may issue Supplemental Instruction to Contractor.

1. If Contractor is satisfied with Supplemental Instruction and does not request a change in Contract Sum or Contract Time, then Supplemental Instruction shall be executed without a Change Order.
2. If Contractor believes that Supplemental Instruction results in a change in Contract Sum or Contract Time, then Contractor must submit a Cost Proposal to City within 21 Days of receiving the Supplemental Instruction.

**D. Construction Change Directives:** If at any time City believes in good faith that a timely Change Order will not be agreed upon using the foregoing procedures, City may issue a CCD with its recommended cost and/or time adjustment. Upon receipt of CCD, Contractor shall promptly proceed with the change of Work involved and concurrently respond to City's CCD within 10 Days.

1. Contractor's response must be any one of following:
  - a. Return CCD signed, thereby accepting City's response, time, and cost.
  - b. Submit a (revised if applicable) Cost Proposal with supporting documentation (if applicable, reference original Cost Proposal number followed by letter A, B, etc. for each revision), if City so requests.
  - c. Give notice of intent to submit a Claim as described in Article 12 of Document 00700 (General Conditions), and submit its Claim within 30 Days.
2. If the CCD provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:
  - a. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation.
  - b. Unit prices stated in the Contract Documents or subsequently agreed upon.
  - c. Cost to be determined in a manner agreed.
3. CCD signed by Contractor indicates the agreement of Contractor therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.
4. If Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by City on the basis of reasonable expenditures and savings of those performing the Work attributable to the change including, in case of an increase in the Contract Sum, a reasonable allowance for overhead and profit. If the parties still do not agree on the price for a CCD, Contractor may file a Claim per Article 12 of Document 00700 (General Conditions). Contractor shall keep and present, in such form as City may prescribe, an itemized accounting together with appropriate supporting data.

Unless otherwise provided in the Contract Documents, costs for the purposes of this paragraph shall be limited to those provided in this Section 01250.

5. Pending final determination of cost to City, amounts not in dispute may be included in Applications for Payment. The amount of credit to be allowed by Contractor to City for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by City. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

E. **City Requested RFP:** Contractor shall furnish a Cost Proposal within 5 Business Days of City's RFP. Upon approval of RFP, City will issue a Change Order directing Contractor to proceed with extra Work. If the parties do not agree on the price for an RFP, City may either issue a CCD or decide the issue per Article 12 of Document 00700 (General Conditions). Contractor shall perform the changed Work notwithstanding any claims or disagreements of any nature.

F. **Differing Site Conditions:** Contractor shall submit Notices of Differing Site Conditions to resolve problems regarding differing underground Site conditions encountered in the execution of the Work pursuant to Paragraph 13.4 of Document 00700 (General Conditions), which shall govern. If City determines that a change in Contract Sum or Contract Time is justified, City will issue RFP or CCD.

G. **Hazardous Waste Conditions:** Contractor shall submit Notices of Hazardous Waste Conditions to resolve problems regarding hazardous materials encountered in the execution of the Work pursuant to Paragraph 13.5 of Document 00700 (General Conditions), which shall govern. If City determines that a change in Contract Sum or Contract Time is justified, City will issue RFP or CCD.

### 1.3 COST DETERMINATION

A. Total cost of extra Work or of Work omitted shall be the sum of labor costs, material costs, equipment rental costs, and specialist costs as defined herein plus overhead and profit as allowed herein. This limit applies in all cases of claims for extra Work, whether calculating Cost Proposals, Change Orders or CCDs, or calculating claims of all types, and applies even in the event of fault, negligence, strict liability, or tort claims of all kinds, including strict liability or negligence. Contractor may recover no other costs arising out of or connected with the performance of extra Work, of any nature. No special, incidental or consequential damages may be claimed or recovered against City, its representatives or agents, whether arising from breach of Contract, negligence, or strict liability, unless specifically authorized in the Contract Documents.

B. **Overhead and Profit:** (Overhead shall be as defined in this Section 01250)

1. Overhead and profit on labor for extra Work shall be 15 percent.
2. Overhead and profit on materials for extra Work shall be 15 percent.
3. Overhead and profit on equipment rental for extra Work shall be 10 percent.
4. When extra Work is performed by a first tier Subcontractor, Contractor shall receive a 5 percent markup on Subcontractors' total costs of extra Work. First tier Subcontractor's markup on its Work shall not exceed 15 percent.
5. When extra Work is performed by a lower tier Subcontractor, Contractor shall receive a total of 5 percent markup on the lower tier Subcontractors' total costs of extra Work. Contractor and first tier Subcontractors and lower tier Subcontractors shall divide the 10 percent markup as mutually agreed.
6. Notwithstanding the foregoing, in no case shall the total markup on any extra Work exceed 20 percent of the direct cost, notwithstanding the actual number of Contract tiers.
7. On proposals covering both increases and decreases in Contract Sum, overhead, profit, and commission shall be allowed on the net increase only as determined in this Section 01250. When the net difference is a deletion, no percentage for overhead profit and commission shall be allowed, but rather a deduction shall apply.

8. The markup shall include profit, small tools, cleanup, engineering, supervision, warranties, cost of preparing the cost proposal, jobsite overhead, and home office overhead. No markup will be allowed on taxes, insurance, and bonds.

C. Taxes:

1. All State sales tax, use tax, and San Mateo County and applicable City sales taxes shall be included.
2. Federal and Excise tax shall not be included.

D. **Owner-Operated Equipment:** When owner-operated equipment is used to perform extra Work, Contractor will be paid for operator as follows:

1. Payment for equipment will be made in accordance with this Section 01250.
2. Payment for cost of labor will be made at no more than rates of such labor established by collective bargaining agreements for type of worker and location of Work, whether or not owner-operator is actually covered by such an agreement.

E. **Accord and Satisfaction:** Every Change Order and accepted CCD shall constitute a full accord and satisfaction, and release, of all Contractor (and if applicable, Subcontractor) claims for additional time, money or other relief arising from or relating to the subject matter of the change including, without limitation, impacts of all types, cumulative impacts, inefficiency, overtime, delay, and any other type of claim. Contractor may elect to reserve its rights to disputed claims arising from or relating to the changed Work at the time it signs a Change Order or approves a CCD, but must do so expressly in a writing delivered concurrently with the executed Change Order or approved CCD, and must also submit a Claim for the reserved disputed items pursuant to Article 12 of Document 00700 (General Conditions) no later than 30 Days of Contractor's first written notice of its intent to reserve rights.

1.4 **COST BREAKDOWN**

A. **Labor:** Contractor will be paid cost of labor for workers (including forepersons when authorized by City) used in actual and direct performance of extra Work. Labor rate, whether employer is Contractor, Subcontractor or other forces, will be sum of following:

1. **Actual Wages:** Actual wages paid shall include any employer payments to or on behalf of workers for health and welfare, pension, vacation, and similar purposes.
2. **Labor Surcharge:** Payments imposed by local, county, state, and federal laws and ordinances, and other payments made to, or on behalf of, workers, other than actual wages as defined in Paragraph 1.4(A)(1) of this Section 01250, such as taxes and insurance. Labor surcharge shall be and shall not exceed that set forth in California Department of Transportation official labor surcharges schedule which is in effect on date upon which extra Work is accomplished and which schedule is incorporated herein by reference as though fully set forth herein.

B. **Material:** Only materials furnished by Contractor and necessarily used in performance of extra Work will be paid for. Cost of such materials will be cost, including sales tax, to purchaser (Contractor, Subcontractor or other forces) from supplier thereof, except as the following are applicable:

1. If cash or trade discount by actual supplier is offered or available to purchaser, it shall be credited to City notwithstanding fact that such discount may not have been taken.
2. For materials salvaged upon completion of extra Work, salvage value of materials shall be deducted from cost, less discounts, of materials.
3. If cost of a material is, in opinion of City, excessive, then cost of material shall be deemed to be lowest current wholesale price at which material is available in quantities concerned delivered to Site, less any discounts as provided in this Section 01250.

C. **Equipment Rental:** For Contractor- or Subcontractor-owned equipment, payment will be made at rental rates listed for equipment in California Department of Transportation official equipment rental rate

schedule which is in effect on date upon which extra Work is accomplished and which schedule is incorporated herein by reference as though fully set forth herein. If there is no applicable rate for an item of equipment, then payment shall be made for Contractor- or Subcontractor-owned equipment at rental rate listed in the most recent edition of the Association of Equipment Distributors (AED) book. For rented equipment, payment will be made based on actual rental invoices. Equipment used on extra Work shall be of proper size and type. If, however, equipment of unwarranted size or type and cost is used, cost of use of equipment shall be calculated at rental rate for equipment of proper size and type, as determined by City. Rental rates paid shall be deemed to cover cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals. Unless otherwise specified, manufacturer's ratings, and manufacturer-approved modifications, shall be used to classify equipment for determination of applicable rental rates. Individual pieces of equipment or tools not listed in said publication and having a replacement value of \$100 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefor as payment is included in payment for labor. Rental time will not be allowed while equipment is inoperative due to breakdowns.

1. For equipment on Site, rental time to be paid for equipment shall be time equipment is in operation on extra Work being performed or on standby as approved by City. The following shall be used in computing rental time of equipment:
  - a. When hourly rates are listed, less than 30 minutes of operation shall be considered to be  $\frac{1}{2}$  hour of operation.
  - b. When daily rates are listed, less than four hours of operation shall be considered to be  $\frac{1}{2}$  Day of operation.
2. For equipment that must be brought to Site to be used exclusively on extra Work, cost of transporting equipment to Site and its return to its original location shall be determined as follows:
  - a. City will pay for costs of loading and unloading equipment.
  - b. Cost of transporting equipment in low bed trailers shall not exceed hourly rates charged by established haulers.
  - c. Cost of transporting equipment shall not exceed applicable minimum established rates of California Public Utilities Commission.
  - d. City will not make any payment for transporting and loading and unloading equipment if equipment is used on Work in any other way than upon extra Work.
3. Rental period may begin at time equipment is unloaded at Site of extra Work and terminate at end of the performance of the extra Work or Day on which City directs Contractor to discontinue use of equipment, whichever first occurs. Excluding Saturdays, Sundays, and City's legal holidays, unless equipment is used to perform extra Work on such Days, rental time to be paid per Day shall be four hours for zero hours of operation, six hours for four hours of operation and eight hours for eight hours of operation, time being prorated between these parameters. Hours to be paid for equipment that is operated less than eight hours due to breakdowns, shall not exceed eight less number of hours equipment is inoperative due to breakdowns.

C. **Work Performed by Special Forces or Other Special Services:** When City and Contractor, by agreement, determine that special service or item of extra Work cannot be performed by forces of Contractor or those of any Subcontractors, service or extra Work item may be performed by specialist. Invoices for service or item of extra Work on basis of current market price thereof may be accepted without complete itemization of labor, material, and equipment rental costs when it is impracticable and not in accordance with established practice of special service industry to provide complete itemization. In those instances wherein Contractor is required to perform extra Work necessitating a fabrication or machining process in a fabrication or machine shop facility away from Site, charges for that portion of extra Work performed in such facility may, by agreement, be accepted as a specialist billing. City must be notified in advance of all off-Site Work. In lieu of overhead and profit provided in Paragraph 1.3B of this Section 01250, 15 percent will be added to specialist invoice price, after deduction of any cash or trade discount offered or available, whether or not such discount may have been taken.

## 1.5 FORCE-ACCOUNT WORK

- A. If it is impracticable because of nature of Work, or for any other reason, to fix an increase or decrease in price definitely in advance, the Contractor may be directed to proceed at a not-to-exceed (NTE) maximum price which shall not under any circumstances be exceeded. Subject to such limitation, such extra Work shall be paid for at actual necessary cost for Force-Account Work or at the negotiated cost, as determined by City. The cost for Force-Account Work shall be determined pursuant to this Section 01250.
- B. Force-Account Work shall be used when it is not possible or practical to price out the changed Work prior to the start of that Work. In these cases, Force-Account Work will be utilized during the pricing and negotiation phase of the change. Once negotiations have been concluded and a bilateral agreement has been reached, the tracking of the Work under Force-Account is no longer necessary. Force-Account Work shall also be used when negotiations between City and Contractor have broken apart and a bilateral agreement on the value of the changed Work cannot be reached. City may approve other uses of Force-Account Work.
- D. Whenever any Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to City each Business Day in writing in detail amount and cost of labor and material used, and any other expense incurred in Force-Account Work on preceding Day, by using the Cost Proposal form attached hereto. No claim for compensation for Force-Account Work will be allowed unless report shall have been made.
- E. Whenever Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to City when 75 percent of the NTE amount has been expended.
- F. Force-Account Work shall be paid as extra Work under this Section 01250. Methods of determining payment for Work and materials provided in this Paragraph 1.5 shall not apply to performance of Work or furnishings of material that, in judgment of City, may properly be classified under items for which prices are otherwise established in Contract Documents.

#### 1.6 CITY-FURNISHED MATERIALS

- A. City reserves right to furnish materials as it deems advisable, and Contractor shall have no claims for costs and overhead and profit on such materials.

#### 1.7 OVERHEAD DEFINED

- A. The following constitutes charges that are deemed included in overhead for all Contract Modifications, including Force-Account Work or CCD Work, whether incurred by Contractor, Subcontractors, or suppliers, and Contractor shall not invoice or receive payment for these costs separately:
  - 1. Drawings: field drawings, Shop Drawings, etc., including submissions of drawings
  - 2. Routine field inspection of Work proposed
  - 3. General Superintendence
  - 4. General administration and preparation of cost proposals, schedule analysis, Change Orders, and other supporting documentation as necessary
  - 5. Computer services
  - 6. Reproduction services
  - 7. Salaries of project engineer, superintendent, timekeeper, storekeeper, and secretaries
  - 8. Janitorial services
  - 9. Temporary on-Site facilities:
    - a. Offices
    - b. Telephones
    - c. Plumbing
    - d. Electrical: Power, lighting
    - e. Platforms
    - f. Fencing, etc.
    - g. Water
  - 10. Home Office Overhead

11. Insurance and Bond premiums
12. Procurement and use of vehicles and fuel used coincidentally in Work otherwise included in the Contract Documents
13. Surveying
14. Estimating
15. Protection of Work
16. Handling and disposal fees
17. Final cleanup
18. Other incidental Work

**1.8 RECORDS AND CERTIFICATION**

- A. Force-Account (cost reimbursement) charges shall be recorded daily and summarized in Cost Proposal form attached hereto. Contractor or authorized representative shall complete and sign form each Day. Contractor shall also provide with the form: the names and classifications of workers and hours worked by each; an itemization of all materials used; a list by size, type, and identification number of equipment and hours operated; and an indication of all Work performed by specialists.
- B. No payment for Force-Account Work shall be made until Contractor submits original invoices substantiating materials and specialists charges.
- C. City shall have the right to audit all records in possession of Contractor relating to activities covered by Contractor's claims for Modification of Contract, including Force-Account Work and CCD Work.
- D. Further, City will have right to audit, inspect, or copy all records maintained in connection with this Contract, including financial records, bidding records, in possession of Contractor relating to any transaction or activity occurring or arising out of, or by virtue of, the Contract. If Contractor is a joint venture, right of City shall apply collaterally to same extent to records of joint venture sponsor, and of each individual joint venture member. This right shall be specifically enforceable, and any failure of Contractor to voluntarily comply shall be deemed an irrevocable waiver and release of all claims then pending that were or could have been subject to the Article 12 of Document 00700 (General Conditions).

**PART 2 PRODUCTS – NOT USED**

**PART 3 EXECUTION – NOT USED**

COST PROPOSAL FORM FOLLOWS ON NEXT PAGE

END OF SECTION



**COST PROPOSAL (CP)**

City of San Bruno Belle Air Storm Drainage Improvements  
Contract Number 84201

CP Number: \_\_\_\_\_

Date: \_\_\_\_\_

In Response To \_\_\_\_\_  
RFP #, etc.

**To: City of San Bruno**  
Attention: City Engineer  
567 El Camino Real  
San Bruno, CA 94066  
Phone: (650) 616-7065

Subject Ref. No: \_\_\_\_\_  
(for Project Manager use only)  
Fax: (650) 794-1443

**From: Insert Contractor's Name/Address**

\_\_\_\_\_

\_\_\_\_\_

This Cost Proposal is in response to the above-referenced \_\_\_\_\_ [insert RFP, etc. as applicable].  
Brief description of change(s): \_\_\_\_\_

\_\_\_\_\_

ITEM DESCRIPTION	PRIME CONTRACTOR	SUB 1	SUB 2	SUB 3	SUB 4	TOTAL
<b>MATERIAL</b>						
Direct Labor Cost						
<b>EQUIPMENT</b>						
Other (Specify) Extended Overhead						
<b>TOTAL COST</b>						
Subcontractor's Overhead & Profit 15 percent						
Contractor's Overhead & Profit 15 percent						
Overhead & Profit to Contractor for Subcontractor's Work 5 percent						
(percent of Total Cost above not including any Overhead & Profit)						
<b>GRAND TOTAL</b>						
<b>REQUESTED CHANGE IN CONTRACT TIME (DAYS)</b>						

By Contractor:

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**SECTION 01315  
PROJECT MEETINGS**

**PART 1 GENERAL**

**1.1 PRECONSTRUCTION CONFERENCE**

- A. City will call for and administer Preconstruction Conference at time and place to be announced (usually the week prior to start of Work at the Site).
  - B. Contractor, all major Subcontractors, and major suppliers shall attend Preconstruction Conference.
  - C. Agenda will include, but not be limited to, the following items.
    - 1. Schedules
    - 2. Personnel and vehicle permit procedures
    - 3. Use of premises
    - 4. Location of any Contractor on-Site facilities
    - 5. Security
    - 6. Housekeeping
    - 7. Submittal and RFI procedures
    - 8. Inspection and testing procedures, on-Site and off-Site
    - 9. Control and reference point survey procedures
    - 10. Injury and Illness Prevention Program
    - 11. Contractor's Initial Schedule
    - 12. Contractor's Schedule of Values
    - 13. Contractor's Schedule of Submittals
  - D. City will distribute copies of minutes to attendees. Attendees shall have 7 Days to submit comments or additions to minutes. Minutes will constitute final memorialization of results of Preconstruction Conference.
- 1.2 WEEKLY PROGRESS MEETINGS**
- A. City will schedule and administer weekly progress meetings throughout duration of Work. Progress meetings will be held weekly unless otherwise directed by City.
    - 1. Meetings shall be held at the City of San Bruno Public Services Department, Administration & Engineering, 567 El Camino Real, San Bruno, CA. 94066.
    - 2. A City Representative will prepare agenda and distribute it 4 Days in advance of meeting to Contractor.
    - 3. Participants with agenda items shall present them.
    - 4. The City Engineer's authorized representative shall preside at the meetings.
    - 5. The City shall record and distribute the meeting minutes. Minutes shall be distributed by the City to the Contractor within 3 business days after the meeting. Contractor shall distribute the minutes to those affected by decisions made at meeting. Attendees shall have five business days to submit comments or additions to the minutes. Minutes shall constitute final memorialization of results of meeting.
  - B. Progress meetings shall be attended by Contractor's job superintendent, major Subcontractors and suppliers, City, and others as appropriate to agenda topics for each meeting.
  - C. Agenda will contain the following items, as appropriate:

1. Review, revise as necessary, and approve previous meeting minutes
2. Review of Work progress since last meeting
3. Status of Construction Work Schedule, delivery schedules, adjustments
4. Submittal, RFI, and Change Order status
5. Review of the Contractor's safety program activities and results, including report on all serious injury and/or damage accidents
6. Other items affecting progress of Work

### **1.3      PROGRESS SCHEDULE AND BILLING MEETINGS**

- A.      A meeting will be held on approximately the 20<sup>th</sup> of each month to review the schedule update submittal and progress payment application.
1.      At this meeting, at a minimum, the following items will be reviewed:
    - a.      Percent complete of each activity;
    - b.      Time impact evaluations for Change Orders and Time Extension Request;
    - c.      Actual and anticipated activity sequence changes;
    - d.      Actual and anticipated duration changes; and
    - e.      Actual and anticipated Contractor delays.
  2.      These meetings are considered a critical component of overall monthly schedule update submittal and Contractor shall have appropriate personnel attend. At a minimum, Contractor's General Superintendent and Scheduler shall attend these meetings.
  3.      Contractor shall plan on the meeting taking no less than one hour.

### **1.4      SAFETY MEETINGS**

- A.      Conduct monthly Contractor Safety Committee meetings.
- B.      Conduct weekly toolbox safety talks.

### **PART 2 PRODUCTS – NOT USED**

### **PART 3 EXECUTION – NOT USED**

END OF SECTION

**SECTION 01320**

**PROGRESS SCHEDULES AND REPORTS**

**PART 1 GENERAL**

**1.1 GENERAL**

- A. Progress Schedule shall be based on and incorporate Milestone and completion dates specified in Contract Documents.
- B. Overall time of completion and time of completion for each Milestone shown on Progress Schedule shall adhere to times in Document 00520 (Agreement), unless an earlier (advanced) time of completion is requested by Contractor and agreed to by City. A Change Order shall formalize any such agreement.
1. City is not required to accept an earlier (advanced) schedule, i.e., one that shows early completion date(s) for the Contract Time.
2. Contractor is not entitled to extra compensation in the event agreement is reached on an earlier (advanced) schedule and Contractor completes its Work, for whatever reason, beyond completion date shown in earlier (advanced) schedule but within the Contract Time.
- C. Failure of Progress Schedule to include any element of the Work or any inaccuracy in Progress Schedule will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. City's acceptance of Schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests, and shall not, in any manner, impose a duty of care upon City, or act to relieve Contractor of its responsibility for means and methods of construction.

**1.2 INITIAL AND ORIGINAL PROGRESS SCHEDULE**

- A. Initial Schedule submitted for review at the Preconstruction Conference shall serve as Contractor's schedule for up to 30 Days after the Notice to Proceed.
- B. Initial Schedule must indicate detailed plan for the Work to be completed in first 30 Days of the Contract; details of planned mobilization; sequence of early operations; and procurement of materials and equipment. Show Work beyond 30 Days in summary form.
- C. Contractor shall submit its Original Schedule for review no later than 15 days prior to submittal of the first progress payment application. Original Schedule and all updates shall comply with all standards herein.

**1.3 SCHEDULE FORMAT AND LEVEL OF DETAIL**

- A. Each Schedule (Initial, Original, and updates) shall indicate all separate fabrication, procurement and field construction activities required for completion of the Work, including but not limited to the following:
  1. All Contractor, Subcontractor, and assigned Contractor Work shall be shown in a logical Work sequence that demonstrates a coordinated plan of Work for all contractors. The intent is to provide a common basis of acceptance, understanding, and communication, as well as interface with other contractors.
  2. Activities related to the delivery of Contractor- and City -furnished equipment to be Contractor-installed per Contract shall be shown.
  3. All activities shall be identified through codes or other identification to indicate the building (i.e. buildings, Site Work) and Contractor/Subcontractor responsibility to which they pertain.
  4. Break up the Work schedule into activities of durations of approximately 21 Days or less each, except for non-field construction activities or as otherwise deemed acceptable by City.
  5. Show the critical path in red. For each activity, show early start, late start, early finish, late finish, durations measured in Days, Project Float, resources, predecessor and successor activities, planned workday/week for the activity, manpower loading, and scheduled/actual progress payments.

- B. Seasonal weather conditions (which do not constitute a delay as defined herein) shall be considered in the planning and scheduling of all potential Work influenced by high or low ambient temperatures or presence of high moisture for the completion of the Work within the allotted Contract Time.
- C. Failure by Contractor to include any element of Work required for performance of the Work on the detailed construction schedule shall not excuse Contractor from completing all Work required within the Contract Time.
- D. A two-week "look ahead," detailed daily bar chart schedule shall be updated and issued weekly.
- E. Utilize computer-scheduling software, such as Microsoft Project software or approved equivalent, for all scheduling including schedule updates.

#### **1.4 MONTHLY SCHEDULE UPDATE SUBMITTALS**

- A. Following acceptance of Contractor's Initial Schedule, Contractor shall monitor progress of Work and adjust its Schedule each month to reflect actual progress in blue and any anticipated changes to planned activities.
  - 1. Each Schedule update submitted shall be complete, including all information requested for the Initial Schedule and Original Schedule submittal.
  - 2. Each update shall continue to show all Work activities including those already completed.
  - 3. Completed activities (shown in blue) shall accurately reflect "as built" information by indicating when activities were actually started and completed, and Contractor warrants the accuracy of as-built information as shown.

- B. Updating, changing or revising of any report, curve, schedule or narrative submitted to City by Contractor under this Contract, nor City's review or acceptance of any such report, curve, schedule or narrative shall not have the effect of amending or modifying, in any way, the Contract Substantial Completion date or Milestone dates or of modifying or limiting, in any way, Contractor's obligations under this Contract.

#### **1.5 RECOVERY SCHEDULE**

- A. If a Schedule update shows a Substantial Completion date 5 Days beyond any Contract Substantial Completion date, or individual Milestone completion dates, submit to City within seven Days the proposed revisions to recover the lost time. As part of this submittal, provide a written narrative for each revision made to recapture the lost time. If the revisions include sequence changes, provide a schedule diagram comparing the original sequence to the revised sequence of Work. If City reasonably requests, show the intended critical path; secure appropriate Subcontractor and supplier consent to the recovery Schedule; submit a narrative explaining trade flow and construction flow changes, duration changes, added/deleted activities, critical path changes and identify all near critical paths and man-hour loading assumptions for major Subcontractors.

#### **1.6 TIME IMPACT EVALUATION ("TIE") FOR CHANGE ORDERS, TIME EXTENSIONS AND DELAYS**

- A. When Contractor requests a time extension for any reason, Contractor shall submit a TIE that includes both a written narrative and a schedule diagram depicting how the changed Work or other impact affects other schedule activities. The schedule diagram shall show how Contractor proposes to incorporate the changed Work or other impact in the schedule, and how it impacts the current Schedule update critical path or otherwise. Contractor is also responsible for requesting time extensions based on the TIE's impact on the critical path. The diagram shall be tied to the main sequence of scheduled activities to enable City to evaluate the impact of changed Work to the scheduled critical path.
- B. Contractor shall comply with the requirements of paragraph 1.6A of this Section 01320 for all types of delays such as, but not limited to, Contractor/Subcontractor delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc.
- C. Contractor is responsible for all costs associated with the preparation of TIEs, and the process of incorporating TIEs into the current schedule update. Provide City with four copies of each TIE.

**1.7 DAILY REPORTS**

- A. Contractor shall provide daily construction reports showing personnel, trades, equipment and supervision on site; weather; work started, completed and any impediments, problems or delays, for the work day. Submit to City the following morning.

**1.8 COST DATA**

- A. Contractor shall provide City with copies for each Day Contractor works on the Project, to be delivered to City either the same Day or the following morning before starting Work at the Site. Contractor shall take monthly progress photographs of all areas of the Work. Contractor shall maintain copies of all correspondence with Subcontractors and records of meetings with Subcontractors.

**PART 2 PRODUCTS – NOT USED**

**PART 3 EXECUTION – NOT USED**

END OF SECTION

**SECTION 01330**

**SUBMITTAL PROCEDURES**

**PART 1 GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Description of general requirements for Submittals for the Work:
  - a. Procedures
  - b. Project Record Documents
  - c. Safety Plan, Access Plan
  - d. List of Submittals

**1.2 PROCEDURES**

- A. Submit at Contractor's expense, all required Submittals in triplicate, including but not limited to, Schedule of Shop Drawing and Sample Submittals, Safety Plans, Progress Schedule, Product Data, Shop Drawings, Samples, Quality Assurance Control Data, and Project Record Documents required by the Contract Documents to City for review and approval in accordance with accepted Schedule of Shop Drawings and Samples Submittals. If no such schedule is agreed upon, then all Shop Drawings, Samples, and product data Submittals shall be submitted within fourteen (14) Days after receipt of Notice of Award from City.
- B. Transmit each item with the appropriate Submittal transmittal form (attached to this Section 01330 as Exhibit A).
  - A). Where manufacturer's standard drawings or data sheets are used, they shall be marked clearly to show those portions of the data that are applicable to this Project. Inapplicable portions shall be marked out. Organize Submittals by Specification Section. Submittals containing information about more than one Specification Section will be returned for resubmittal. Submittals shall include all information requested by each Specification Section. Incomplete Submittals will be returned not reviewed by City.
- C. The data shown on the Submittals shall be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show City the materials and equipment Contractor proposes to provide and to enable City to review the information for the limited purposes specified in this Section 01330. Submittals shall be identified clearly as to material, supplier, pertinent data such as catalog numbers and the use for which it is intended and otherwise as City may require to enable City to review the Submittal.
- D. At the time of each submission, give City specific written notice of all variations, if any, that the Submittal may have from the requirements of the Contract Documents, and the reasons therefore. This written notice shall be in a written communication attached to the Submittal transmittal form. In addition, cause a specific notation to be made on each Submittal submitted to City for review and approval of each such variation. If City accepts deviation, City will note its acceptance on the returned Submittal transmittal form and, if necessary, issue appropriate Contract Modification.
- E. Submittal coordination and verification is the responsibility of Contractor; this responsibility shall not be delegated in whole or in part to Subcontractors or suppliers. Before submitting each Submittal, review and coordinate each Submittal with other Submittals and with the requirements of the Work and the Contract Documents, and determine and verify:
  1. All field measurements, quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
  2. All materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3. All information relative to Contractor's sole responsibility for means, methods, techniques, sequences, and procedures of construction and safety precautions and programs incident thereto.
- F. Contractor's submission to City of a Submittal shall constitute Contractor's representation that it has satisfied its obligations under the Contract Documents, and as set forth in this Paragraph 1.2 of this Section 01330, with respect to Contractor's review and approval of that Submittal.
- G. Designation of Work "by others," if shown in Submittals, shall mean that Work will be responsibility of Contractor rather than Subcontractor or supplier who has prepared Submittals.
- H. After review by City of each Submittal, material will be returned to Contractor with actions defined as follows:
  1. NO EXCEPTIONS TAKEN - Accepted subject to its compatibility with future Submittals and additional partial Submittals for portions of the Work not covered in this Submittal. Does not constitute approval or deletion of specified or required items not shown on the Submittal.
  2. MAKE CORRECTIONS NOTED (NO RESUBMISSIONS REQUIRED) - Same as item 1 above, except that minor corrections as noted shall be made by Contractor.
  3. REVISE AS NOTED AND RESUBMIT - Rejected because of major inconsistencies or errors that shall be resolved or corrected by Contractor prior to subsequent review by City.
  4. REJECTED - RESUBMIT - Submitted material does not conform to Drawings and/or Specifications in major respect, i.e.: wrong size, model, capacity, or material.
- I. Contractor shall make a complete and acceptable Submittal at least by second submission. City reserves the right to deduct monies from payments due Contractor to cover additional costs of review beyond the second submission. Illegible Submittals will be rejected and returned to Contractor for resubmission. Contractor shall be in breach of the Contract if Contractor's first resubmittal, following a Submittal which City determines falls within categories 3 or 4 above, does not fall within categories 1 or 2 above.
- J. Favorable review will not constitute acceptance by City of any responsibility for the accuracy, coordination, or completeness of the Submittals. Accuracy, coordination, and completeness of Submittals shall be sole responsibility of Contractor, including responsibility to back-check comments, corrections, and modifications from City's review before fabrication. Contractor, Subcontractors, or suppliers may prepare Submittals, but Contractor shall ascertain that Submittals meet requirements of Contract Documents, while conforming to structural space and access conditions at point of installation. City's review will be only to assess if the items covered by the Submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as indicated by the Contract Documents. Favorable review of Submittal, method of Work, or information regarding materials and equipment Contractor proposes to furnish shall not relieve Contractor of responsibility for errors therein and shall not be regarded as assumption of risks or liability by City, or any officer or employee thereof, and Contractor shall have no claim under Contract Documents on account of failure or partial failure or inefficiency or insufficiency of any plan or method of Work or material and equipment so accepted. Favorable review shall be considered to mean merely that City has no objection to Contractor using, upon Contractor's own full responsibility, plan or method of Work proposed, or furnishing materials and equipment proposed.
- K. Unless otherwise specified, City's review will not extend to the means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
- L. Contractor shall submit complete initial Submittal for those items where required by individual Specification Sections. Complete Submittal shall contain sufficient data to demonstrate that items comply with Specifications, shall meet minimum requirements for submissions cited in Specification Sections, shall include motor data and seismic anchorage certifications, where required, and shall include necessary revisions required for equipment other than first named. If Contractor submits incomplete initial Submittal when complete Submittal is required, Submittal may be returned to Contractor without review.



for equipment other than first named. If Contractor submits incomplete initial Submittal when complete Submittal is required, Submittal may be returned to Contractor without review.

M. Contractor shall copy, conform, and distribute reviewed Submittals in sufficient numbers for Contractor's files, Subcontractors, and vendors.

N. After City's review of Submittal, Contractor shall revise as noted and resubmit as required. Contractor shall identify changes made since previous Submittal.

1. Contractor shall begin no fabrication or Work that requires Submittals until return of Submittals not requiring resubmittal. Do not extrapolate from Submittals covering similar Work.

2. Normally, Submittals will be processed and returned to Contractor within 10 Days of receipt.

O. Contractor shall distribute copies of reviewed Submittals to concerned persons. Contractor shall instruct recipients to promptly report any inability to comply with provisions.

P. All Submittals shall be number-identified by Contractor, prior to submission to City, in accordance with the following:

1. Sequentially number each Submittal (i.e., "1", "2", "3", etc.) as the basis for number identification of Submittals.

2. Affix the Submittal number under which each Submittal is made on every copy of each Shop Drawing, Product Data, Sample, certification, etc.

3. Number Installation, Operation, and Maintenance Manual with original root number of the favorably reviewed Submittal for the item.

4. If the Submittal is a resubmittal (including without limitation after an initial Submittal is rejected, returned without review, or marked 'Revise as Noted and Resubmit'), add the suffix designation "A" (i.e., a resubmittal of Submittal 1 would be numbered 1A). Subsequent resubmittals would be identified by the Submittal number and sequential letters (i.e., "B", "C", "D", etc.).

5. All Submittals shall include all information requested by each Specification Section. No partial Submittals will be accepted unless previously authorized by City. In the event a partial Submittal is authorized, each subsequent different Submittal (as opposed to resubmittal) shall be given a new number.

Q. Submission Requirements:

1. Deliver Submittals to City at least 14 Days before dates reviewed Submittals will be needed.

### 1.3 PROJECT RECORD DOCUMENTS

A. Submit Project Record Documents as required by Section 01780 (Project Record Documents).

### 1.4 SAFETY PLAN, ACCESS PLAN

A. Submit two (2) copies of Safety Plan, Access Plan specific to this Contract to the City within five (5) calendar days after the Notice to Proceed. The access plan will show the contractor's proposal for limiting site access and where other access inhibitors will be located in order to protect open trenches and other hazardous areas.

B. (1) copy of accepted Section 1.4.A Plans will be returned to the Contractor.

C. No on-site work shall be started until Section 1.04.A Plans have been reviewed and accepted by City. Acceptance of Section 1.04.A Plans shall not affect the Contractor's responsibility for maintaining a safe working place and instituting safety programs in connection with project.

**1.5 LIST OF SUBMITTALS**

The list of technical submittals shall include, but not be limited to the following:

- (a) Schedules of work
- (b) Traffic Control Plans for each stage of work
- (c) Storm Water Pollution Prevention Plan (SWPPP)
- (d) Asphalt Products
- (e) Asphalt Concrete Mix
- (f) Portland Cement Concrete Mix
- (f) Public Notification Plan
- (g) Project Notification Sign
- (h) Trench drain system shop drawings and component layout drawings showing profiles
- (i) Other submittals required by the project specifications
- (j) Other submittals required by the Engineer
- (k) Tree Protection Plan
- (l) Safety Plan, Access Plan

**PART 2 PRODUCTS – NOT USED**

**PART 3 EXECUTION – NOT USED**

TRANSMITTAL FORM FOLLOWS THIS PAGE

END OF SECTION

## EXHIBIT A

SUBMITTAL  
TRANSMITTAL NO. \_\_\_\_\_

Project Name: City of San Bruno Belle Air Storm Drainage Improvements			Date Received:	
Owner: City of San Bruno, Public Services Department 567 El Camino Real San Bruno, California 94066			Checked By:	
Contractor:		Address:		Log Page:
Attention:		Attention:		Specification Section Number:
Date Transmitted:		Previous Transmittal Date:		1 <sup>st</sup> Submittal <input type="checkbox"/> Resubmittal <input type="checkbox"/>
No. Copies	Description	Manufacturer	Dwg. or Data No.	Action Taken*

Remarks:

\* The action designated above is in accordance with the following legend:

A – No Exceptions Taken

D – Rejected – Resubmit

B – Make Corrections Noted (No Resubmission Required)

1. Not enough information for review  
2. No reproducibles submitted  
3. Copies illegible

C. – Revise as Noted and Resubmit

4. Not enough copies submitted  
5. Wrong sequence number  
6. Wrong resubmittal number  
7. Wrong Specification section number  
8. Wrong form used  
9. See comments

Comments

By \_\_\_\_\_ Date \_\_\_\_\_

Distribution:

Contractor ☐File ☐Field ☐City ☐Other ☐

## SECTION 01410

### REGULATORY REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section includes: regulatory requirements applicable to Contract Documents.
- B. Specific reference in the Specifications to codes and regulations or requirements of regulatory agencies shall mean the latest printed edition of each adopted by the regulatory agency in effect at the time of the opening of Bids, except as may be otherwise specifically stated in the Contract Documents.
- C. Should any conditions develop not covered by the Contract Documents wherein the finished Work will not comply with current codes, a Change Order detailing and specifying the required Work shall be submitted to and approved by City before proceeding with the Work.

##### 1.2 REFERENCES TO REGULATORY REQUIREMENTS

- A. Contractor shall comply with all codes, laws, ordinances, rules and regulations applicable to the Work, which shall have full force and effect as though printed in full in these Specifications. Code, laws, ordinances, rules and regulations are not furnished to Contractor, because Contractor is assumed to be familiar with these requirements.
- 1. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of federal, state, and local governmental agencies and jurisdictions having authority over the Project.
- 2. Work shall be accomplished in conformance with all rules and regulations of public utilities and utility districts.
- 3. Where such laws, ordinances rules, and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules, and regulations occur subsequent to the time of opening of the Bids.
- B. Change Orders and Claims. The California Public Contract Code (including but not limited to Section 7105 (d)(2)) and the California Government Code (Section 930.2 et. seq.) apply to all contract procedures for changes, time extensions, change orders (time and money), and claims. Any change, alteration, Modifications, waiver, or omission to implement these procedures, shall have no legal effect unless approved in advance in a fully executed Change Order approved in writing by City's legal counsel.

##### 1.3 PRECEDENCE

- A. Where Drawings or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, Drawings and Specifications shall take precedence so long as such increase is legal.
- B. Where no requirements are identified on Drawings or in Specifications, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.
- C. Conflicts between referenced regulatory requirements: Comply with the one establishing the more stringent requirement.
- D. Conflicts between referenced regulatory requirements and Contract Documents: Comply with the one establishing the more stringent requirement.

#### 1.4 REQUIRED PROVISIONS ON CONTRACT CLAIM RESOLUTION

A. The California Public Contract Code specifies required provisions on resolving contract claims less than \$375,000, which are set forth below, and constitute a part of this Contract.

1. For the purposes of this section, "Claim" means a separate demand by Contractor of \$375,000 or less for (1) a time extension, (2) payment or money or damages arising from Work done by or on behalf of Contractor arising under the Contract Documents and payment of which is not otherwise expressly provided for or the Claimant is not otherwise entitled to, or (3) an amount the payment of which is disputed by City. In order to qualify as a Claim, the written demand must state that it is a Claim submitted under paragraph 12 of Document 00700 (General Conditions) and be submitted in compliance with all requirements of Document 00700 (General Conditions), paragraph 12.
2. A voucher, invoice, payment application, or other routine or authorized form of request for payment is not a Claim for purposes of this section. If such request is disputed as to liability or amount, then the disputed portion of the submission may be converted to a Claim under this section by submitting a separate claim in compliance with Contract Documents claim submission requirements.
3. Caution: This section does not apply to tort claims and nothing in this section is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 and Chapter 2 of Part 3 of Division 3.6 of Title 1 of the California Government Code, Sections 900, et seq.

B. Procedure:

1. The Claim must be in writing, submitted in compliance with all requirements of Document 00700 (General Conditions), paragraph 12, including, but not limited to, the time prescribed by and including the documents necessary to substantiate the Claim, pursuant to Document 00700 (General Conditions). Claims must be filed on or before the day of final payment. Nothing in this section is intended to extend the time limit or supersede notice requirements for the filing of claims as set forth in Document 00700 (General Conditions), paragraph 12 or elsewhere in the Contract Documents.
2. For Claims of fifty thousand dollars (\$50,000) or less
  - a. City shall respond in writing within 45 days of receipt of the Claim, or
  - b. City may request in writing within 30 days of receipt of the Claim, any additional documentation supporting the Claim or relating to any defenses or claims City may have against Claimant.
    - 1) If additional information is thereafter required, it shall be requested and provided in accordance with this section, upon mutual agreement of City and Claimant.
    - 2) City's written response to the Claim, as further documented, shall be submitted to Claimant within 15 days after receipt of further documentation or within a period of time no greater than taken by Claimant in producing the additional information, whichever is greater.
3. For Claims over Fifty Thousand Dollars (\$50,000) and less than or equal to \$375,000:
  - a. City shall respond in writing within 60 days of receipt of the Claim, or
  - b. City may request in writing within 30 days of receipt of the Claim, any additional documentation supporting the Claim or relating to any defenses or claims City may have against Claimant.
    - 1) If additional information is thereafter required, it shall be requested and provided in accordance with this section, upon mutual agreement of City and Claimant;
    - 2) City's written response to the Claim, as further documented, shall be submitted to Claimant within 30 days after receipt of further documentation or within a period of time no greater than taken by Claimant in producing the additional information, whichever is greater.
4. Meet and Confer:
  - a. If Claimant disputes City's written response, or City fails to respond within the time prescribed above, Claimant shall notify City, in writing, either within 15 days of receipt of City's response or within 15 days of City's failure to timely respond, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon demand City will schedule a meet and confer conference within 30 days for settlement of the dispute.
  - b. Following the meet and confer conference, if the Claim or any portion remains in dispute, Claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the California Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time Claimant submits its written claim under Paragraph 1.4.B hereunder, until the

time that Claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

## **1.5 COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT**

A. Contractor acknowledges that, pursuant to the Americans with Disabilities Act (ADA), programs, services, and other activities provided by a public entity to the public, whether directly or through a contractor, must be accessible to the disabled public. Contractor shall provide the services specified in the Contract Documents in a manner that complies with the ADA and any and all other applicable federal, state, and local disability rights legislation. Contractor agrees not to discriminate against disabled persons in the provision of services, benefits, or activities provided under this Agreement and further agrees that any violation of this prohibition on the part of Contractor, its employees, agents, or assigns shall constitute a material breach of the Contract Documents.

## **1.6 SUBSTITUTION OF SECURITIES IN LIEU OF RETENTION**

A. In accordance with the provisions of California Public Contract Code Section 22300, substitution of securities for any moneys withheld under Contract Documents to ensure performance is permitted under following conditions:

1. At request and expense of Contractor, securities listed in Section 16430 of the California Government Code, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Contractor and City which are equivalent to the amount withheld under retention provisions of Contract shall be deposited with Controller or with a state or federally chartered bank in California, as the escrow agent, who shall then pay such moneys to Contractor. Upon satisfactory completion of Contract, securities shall be returned to Contractor.
2. Alternatively, Contractor may request and City shall make payment of retentions earned directly to the escrow agent at the expense of Contractor. At the expense of Contractor, Contractor may direct the investment of the payments into securities and receive the interest earned on the investments upon the same terms provided for in this Section 01200 for securities deposited by Contractor. Upon satisfactory completion of Contract Documents, Contractor shall receive from escrow agent all securities, interest, and payments received by the escrow agent from City, pursuant to the terms of this Section 01410. Pay to each Subcontractor, not later than 20 Days after receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each Subcontractor, on the amount of retention withheld to insure the performance of Contractor.
3. Contractor shall be beneficial owner of securities substituted for moneys withheld and shall receive any interest thereon.
4. Enter into escrow agreement with Controller according to Document 00680 (Escrow Agreement for Security Deposits in Lieu of Retention), as authorized under California Public Contract Code Section 22300, specifying amount of securities to be deposited, terms and conditions of conversion to cash in case of default of Contractor, and termination of escrow upon completion of Contract Documents.
5. California Public Contract Code Section 22300 is hereby incorporated in full by this reference.

## **PART 2 PRODUCTS – NOT USED**

## **PART 3 EXECUTION – NOT USED**

END OF SECTION

## SECTION 01420

### REFERENCES AND DEFINITIONS

#### PART 1 GENERAL

##### 1.1 DEFINITIONS

- A. Wherever any of the words or phrases defined below, or a pronoun used in place thereof, is used in any part of the Contract Documents, it shall have the meaning here set forth. In the Contract Documents, the neuter gender includes the feminine and masculine, and the singular number includes the plural.
- B. While City has made an effort to identify all defined terms with initial caps, the following definitions shall apply regardless of case unless the context otherwise requires:
  1. **Addenda:** Written or graphic instruments issued prior to the opening of Bids, which clarify, correct, or change the bidding requirements or the Contract Documents. Addenda shall not include the minutes of the Pre-Bid Conference and/or Site Visit.
  2. **Agreement (Document 00520):** Agreement is the basic Contract Document that binds the parties to construction Work. Agreement defines relationships and obligations between City and Contractor and by reference incorporates Conditions of Contract, Drawings, and Specifications and contains Addenda and all Modifications subsequent to execution of Contract Documents.
  3. **Alternate:** Work added to or deducted from the base Bid, if accepted by City.
  4. **Application for Payment:** Written application for monthly or periodic progress or final payment made by Contractor complying with the Contract Documents.
  5. **Approved Equal:** Approved in writing by City as being of equivalent quality, utility and appearance.
  6. **Architect/Engineer:** If used elsewhere in the Contract Documents, "Architect/Engineer" shall mean a person holding a valid California State Architect's or Engineer's license representing the City in the administration of the Contract Documents. Architect/Engineer may be an employee of or an independent consultant to City. When Architect/Engineer is referred to within the Contract Documents and no Architect/Engineer shall be construed to include employees of Architect/Engineer and/or employees that Architect/Engineer supervises. When the designated Architect/Engineer is an employee of City, his or her authorized representatives on the Project will be included under the term Architect/Engineer. If Architect/Engineer is an employee of City, Architect/Engineer is the beneficiary of all Contractor obligations to City, including without limitation, all releases and indemnities.
  7. **Asbestos:** Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by OSHA or Cal/OSHA.
  8. **Bid:** The offer or proposal of the Bidder submitted on the prescribed form(s) setting forth the prices for the Work to be performed.
  9. **Bidder:** One who submits a Bid.
  10. **Bidding Documents:** All documents comprising the Project Manual (including all documents and Specification Sections listed in Document 00010 [Table of Contents]), including documents supplied for bidding purposes only and Contract Documents.
  11. **Board:** The City Council of the City.

12. **Business Day:** Any Day other than Saturday, Sunday, and the following days that have been designated as holidays by City. If a holiday falls on a Saturday, the preceding Friday will be the holiday. If a holiday falls on a Sunday, the following Monday will be the holiday.

- a. New Year's Day, January 1;
- b. Martin Luther King Jr.'s Birthday, third Monday in January;
- c. Lincoln's Birthday, February 12;
- d. Presidents' Day, third Monday in February;
- e. Memorial Day, last Monday in May;
- f. Independence Day, July 4;
- g. Labor Day, first Monday in September;
- h. Veterans' Day, November 11;
- i. Thanksgiving Day, as designated by the President;
- j. The Day following Thanksgiving Day;
- k. Christmas Day, December 25; and
- l. Each day appointed by the Governor of California and formally recognized by the Board as a day of mourning, thanksgiving, or special observance.

13. **Change Order:** A written instrument prepared by City and signed by City and Contractor, stating their agreement upon all of the following:

- a. a change in the Work;
- b. the amount of the adjustment in the Contract Sum, if any; and
- c. the amount of the adjustment in the Contract Time, if any.

14. **Code Inspector:** A local or state agency responsible for the enforcement of applicable codes and regulations.

15. **Construction Change Directive ("CCD"):** A written order prepared and signed by City, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both.

16. **Contract Conditions or Conditions of the Contract:** Consists of two parts: General Conditions and Supplementary Conditions.

- a. General Conditions are general clauses that are common to the City Contracts, including Document 00700 (General Conditions).
- b. Supplementary Conditions modify or supplement General Conditions to meet specific requirements for these Contract Documents, including Document 00821 (Supplementary Conditions - Insurance).

17. **Contract Documents and Contract:** Contract Documents and Contract shall consist of the documents identified as the Contract Documents in Document 00520 (Agreement), plus all changes, Addenda, and Modifications thereto.

18. **Contract Modification:** Either:

- a. a written amendment to Contract signed by Contractor and City; or
- b. a Change Order; or
- c. a Construction Change Directive; or
- d. a written directive for a minor change in the Work issued by City.

19. **Contract Sum:** The sum stated in the Agreement and, including authorized adjustments, the total amount payable by City to Contractor for performance of the Work and the Contract Documents. The Contract Sum is also sometimes referred to as the Contract Price or the Contract Amount.



20. **Contract Time:** The number or numbers of Days or the dates stated in the Agreement to achieve Substantial Completion of the Work or designated Milestones; and/or to complete the Work so that it is ready for final payment and is accepted.
21. **Contractor:** The person or entity identified as such in the Agreement and referred to throughout the Contract Documents as if singular in number and neutral in gender. The term "Contractor" means the Contractor or its authorized representative.
22. **Contractor's Employees:** Persons engaged in execution of Work under Contract as direct employees of Contractor, as Subcontractors, or as employees of Subcontractors.
23. **City:** The City of San Bruno.
24. **City-Furnished, Contractor-Installed:** Items furnished by City at its cost for installation by Contractor at its cost under Contract Documents.
25. **City's Representative(s):** See Document 00520 (Agreement).
26. **County:** The County of San Mateo, California.
27. **Day:** One calendar day of 24 hours measured from midnight to the next midnight, unless the word "day" is specifically modified to the contrary.
28. **Defective:** An adjective which, when modifying the word "Work," refers to Work that is unsatisfactory or unsuited for the use intended, faulty, or deficient, that does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents (including but not limited to approval of Samples and "or approved equal" items), or has been damaged prior to final payment (unless responsibility for the protection thereof has been assumed by City). City is the sole judge of whether Work is Defective.
29. **Drawings:** The graphic and pictorial portions of Contract Documents, wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.
30. **Equal:** Equal in opinion of City. Burden of proof of equality is responsibility of Contractor.
31. **Final Acceptance or Final Completion:** City's acceptance of the Work as satisfactorily completed in accordance with Contract Documents. Requirements for Final Acceptance/Final Completion include, but are not limited to:
  - a. All systems having been tested and accepted as having met requirements of Contract Documents.
  - b. All required instructions and training sessions having been given by Contractor.
  - c. All Project Record Documents having been submitted by Contractor, reviewed by City, and accepted by City.
  - d. All punch list Work, as directed by City, having been completed by Contractor.
  - e. Generally all Work, except Contractor maintenance after Final Acceptance/Final Completion, having been completed to satisfaction of City.
32. **Force Account:** Work directed to be performed without prior agreement as to lump sum or unit price cost thereof, and which is to be billed at cost for labor, materials, equipment, taxes, and other costs, plus a specified percentage for overhead and profit.
33. **Home Office Overhead:** Home office overhead shall not be included as part of the cost of the Work, but shall be part of Contractor's profit and shall include, but is not limited to, the following: accounting functions of Contractor's main office; general expenses of Contractor's main office; interest on capital; and salaries of any home office estimators and administration.

34. **Milestone:** A principal event specified in Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all Work.
35. **Modification:** Same as Contract Modification.
36. **Not in Contract:** Work that is outside the scope of Work to be performed by Contractor under Contract Documents.
37. **Notice of Completion:** Shall have the meaning provided in California Civil Code §3093, and any successor statute.
38. **Off Site:** Outside geographical location of the Project.
39. **Overhead:** All on-site payroll costs, and fringe benefits of same, for supervising, estimating, expediting, drafting and clerical services where directly affecting the cost of the Work; small tools (less than Five Hundred Dollars (\$500.00) capital cost per item); equipment maintenance and repairs; temporary construction, utilities, and safety requirements, other than falsework, forming and necessary scaffolding; transportation of materials other than direct identifiable cost of specific deliveries, or as included in the price of material; parking fees for workmen; permit fees; cost of reproduction; and General Insurance and Bonds.
40. **Partial Utilization:** Use by City of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all of the Work.
41. **PCBs:** Polychlorinated byphenyls.
42. **Phase:** A specified portion of the Work (if any) specifically identified as a Phase in Document 00520 (Agreement) or Section 01100 (Summary).
43. **Product Data:** That information (brochures, catalog sheets, manufacturer's cut sheets, etc.) supplied by vendors having technical and commercial characteristics of the supplied equipment or materials and accompanying commercial terms such as warranties, instructions, and manuals.
44. **Progress Report:** A periodic report submitted by Contractor to City with progress payment invoices accompanying progress schedule. See Document 00700 (General Conditions).
45. **Project:** Total construction of which Work performed under Contract Documents may be whole or part.
46. **Project Manager:** If used elsewhere in the Contract Documents, "Project Manager" shall mean a person representing the City in the administration of the Contract Documents. Project Manager may be an employee of or an independent consultant to City. When Project Manager is referred to within the Contract Documents and no Project Manager has in fact been designated, then the matter shall be referred to City. The term Project Manager shall be construed to include employees of Project Manager and/or employees that Project Manager supervises. When the designated Project Manager is an employee of City, his or her authorized representatives on the Project will be included under the term Project Manager. If Project Manager is an employee of City Project Manager is the beneficiary of all Contractor obligations to City, including without limitation, all releases and indemnities.
47. **Project Manual:** Project Manual consists of Bidding Requirements, Agreement, Bonds, Certificates, Contract Conditions, Drawings, and Specifications.
48. **Project Record Documents:** All Project deliverables required under Sections 01700 et seq., including without limitation, as-built drawings; Installation, Operation, and Maintenance Manuals; and Machine Inventory Sheets.

49. **Request for Information ("RFI"):** A document prepared by Contractor requesting information regarding the Project or Contract Documents. The RFI system is also a means for City to submit Contract Document clarifications or supplements to Contractor.
50. **Request for Proposals ("RFP"):** A document issued by City to Contractor whereby City may initiate changes in the Work or Contract Time as provided in Contract Documents.
51. **Request for Substitution ("RFS"):** A document prepared by Contractor requesting substitution of materials as permitted and to the extent permitted in Contract Documents.
52. **RFI-Reply:** A document consisting of supplementary details, instructions, or information issued by City that clarifies or supplements Contract Documents, and with which Contractor shall comply. RFI-Replies do not constitute changes in Contract Sum or Contract Time except as otherwise agreed in writing by City. RFI-Replies will be issued through the RFI administrative system.
53. **Samples:** Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
54. **Shop Drawings:** All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
55. **Site:** The particular geographical location of Work performed pursuant to Contract Documents.
56. **Specifications:** The written portion of the Contract Documents consisting of requirements for materials, equipment, construction systems, standards, and workmanship for the Work; performance of related services; and are contained in Divisions 1 through 2.
57. **Standard Specifications:** The May 2006 edition of the Standard Specifications as issued by the State of California Department of Transportation (Caltrans).
58. **Subcontractor:** A person or entity that has a direct contract with Contractor to perform a portion of the Work at the Site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and neutral in gender and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.
59. **Substantial Completion:** The Work (or a specified part thereof) has progressed to the point where, in the opinion of City as evidenced by a Certificate of Substantial Completion, the Work is sufficiently complete, in accordance with Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work (or specified part) is complete and ready for final payment as evidenced by written recommendation of City for final payment. The terms "Substantially Complete" and "Substantially Completed" as applied to all or part of the Work refer to Substantial Completion thereof.
60. **Supplemental Instruction:** A written directive from City to Contractor ordering alterations or Modifications that do not result in change in Contract Sum or Contract Time, and do not substantially change Drawings or Specifications.
61. **Underground Facilities:** All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities that have been installed underground to furnish any of the following services or materials: Electricity, gases, chemicals, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems, or water.
62. **Unit Price Work:** Shall be the portions of the Work for which a unit price is provided in Document 00520 (Agreement) or Section 01100 (Summary).

63. **Work:** The entire completed construction, or the various separately identifiable parts thereof, required to be furnished under the Contract Documents within the Contract Time. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents including everything shown in the Drawings and set forth in the Specifications. Wherever the word "work" is used, rather than the word "Work," it shall be understood to have its ordinary and customary meaning.

C. The following terms are not necessarily identified with initial caps; however they shall have the meaning set forth below:

1. Wherever words "as directed," "as required," "as permitted," or words of like effect are used, it shall be understood that direction, requirements, or permission of City is intended. Words "sufficient," "necessary," "proper," and the like shall mean sufficient, necessary, or proper in judgment of City. Words "approved," "acceptable," "satisfactory," "favorably reviewed," or words of like import, shall mean approved by, or acceptable to, or satisfactory to, or favorably reviewed by City.
2. Wherever the word "may" or "ought" is used, the action to which it refers is discretionary. Wherever the word "shall" or "will" is used, the action to which it refers is mandatory.
3. **By City:** Work that will be performed by City or its agents at the City's expense.
4. **By Others:** Work that is outside scope of Work to be performed by Contractor under this Contract, which will be performed by City, other contractors, or other means.
5. **Concealed:** Work not exposed to view in the finished Work, including within or behind various construction elements.
6. **Exposed:** Work exposed to view in the finished Work, including behind louvers, grilles, registers and various other construction elements.
7. **Furnish:** Supply only, do not install.
8. **Indicated:** Shown or noted on the Drawings.
9. **Install:** Install or apply only, do not furnish.
10. **Latent:** Not apparent by reasonable inspection, including but not limited to, the inspections and research required as a condition to bidding under Document 00700 (General Conditions).
11. **Law:** Unless otherwise limited, all applicable laws including without limitation all federal, state, and local laws, statutes, standards, rules, regulations, ordinances, and judicial and administrative decisions.
12. **Material:** This word shall be construed to embrace machinery, manufactured articles, materials of construction (fabricated or otherwise), and any other classes of material to be furnished in connection with Contract, except where a more limited meaning is indicated by context.
13. **Provide:** Furnish and install.
14. **Shown:** As indicated on Drawings.
15. **Specified:** As written in Specifications.
16. **Testing and special inspection agency:** An independent entity engaged by City to inspect and/or test the workmanship, materials, or manner of construction of buildings or portions of buildings, to determine if such construction complies with the Contract Documents and applicable codes.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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References and Definitions

**SECTION 01500**

**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Temporary Electricity
2. Temporary Telephone
3. Temporary Water
4. Temporary Sanitary Facilities
5. Temporary Barriers and Enclosures
6. Tree and Plant Protection
7. Water Control
8. Traffic Control
9. Storm Water Pollution Prevention Plan
10. Removal of Temporary Facilities and Controls

**1.2 DEFINITIONS**

- A. Dripline:** The area on the ground from the trunk of any tree to the point directly below the outermost tips of the foliage of that tree.
- B. Root Protection Zone (RPZ):** The areas enclosed with tree protection fencing as indicated.
- C. Tree damage:** Tree damage shall include, but not be limited to, the following: significant injury to the root system or other parts of a tree including burning, application of toxic substances, damaging through contact with equipment or machinery, changing the natural grade within the Dripline, compacting the soil within the Dripline, interfering with the normal water requirements of the tree, unauthorized trenching or excavating within the Dripline, or unauthorized removal of more than 1/3 of the live wood, foliage, or roots.

**1.3 SUBMITTALS**

- A. See also Section 01330 (Submittal Procedures)**
- B. Tree Protection Plan**

**1.4 TEMPORARY ELECTRICITY**

- A. Provide, maintain, and pay for electrical power at the Site for construction purposes.**

**1.5 TEMPORARY TELEPHONE**

- A. Provide, maintain, and pay for telephone service to field office at time of Project mobilization.**

**1.6 TEMPORARY WATER**

- A. Provide, maintain, and pay for suitable quality water service required for construction operations.**
- B. Contractor may use City-provided water from nearby fire hydrants for use on this Project. Contact City three Days prior to commencement of Work to coordinate using City's water. City will provide and install a backflow prevention device and water meter if City determines it to be necessary. This water will only be**

available from 8:00 a.m. to 5:00 p.m. Mondays through Fridays (excluding holidays). Should City determine, in its sole discretion, that Contractor's use of City's water is excessive, City may terminate water delivery.

## **1.7 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required temporary buildings with sanitary toilets for use of all workers.
- B. Comply with all minimum requirements of the Health Department or other public agency having jurisdiction; maintain in a sanitary condition at all times.

## **1.8 TEMPORARY BARRIERS AND ENCLOSURES**

- A. Provide barriers to prevent unauthorized entry to construction areas, to allow for City's use of Site, and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide barricades required by governing authorities for public access to existing buildings.
- C. Protect vehicular traffic, stored materials, Site, and structures from damage.

## **1.9 TREE AND PLANT PROTECTION**

- A. Root protection: No storage of materials or equipment will be allowed within the Dripline. Whenever possible, excavation shall be on a radial line, diverging from the tree trunk.
- B. Exposure to harmful substances: No storage or dumping of any substances that may be harmful to trees shall occur at any location on the Site.
- C. Where construction is to be performed in the vicinity of trees and shrubbery, the Work shall be carried on in a manner that will cause minimum damage. City will designate any trees that are to be removed. Under no circumstances are additional trees to be removed without written permission from City. Trees and shrubbery that are not to be removed shall be protected from injury or damage resulting from Contractor's operations.
- D. All damage shall be immediately reported to City, who will file a report so that penalties may be determined.
- E. Any tree that is removed without City's permission or is irreparably damaged, in the opinion of City, shall cost Contractor \$27.00 per square inch of cross section, measured at 4 ½ feet above ground, but not less than \$250.00, such cost to be deducted from monies due or to become due under the Contract. If tree protection is not performed or is not performed adequately, and City determines that a tree has been irreparably damaged, City will impose the same penalty as for unauthorized removal of a tree.

## **1.10 WATER CONTROL**

- A. See Paragraph 3.6D (Dewatering) of Section 02050 (Earthwork) for additional information on water control.
- B. Grade Site to drain.
- C. Maintain excavations free of water.
- D. Protect Site from puddling or running water.
- E. Provide water barriers as required to protect Site from soil erosion.

## **1.11 NOISE CONTROL**

- A. When required by OSHA Standards, construction workers shall be provided with ear protection to operate equipment.
- B. Work that produces noise levels above ambient will not be permitted prior to 8:00 a.m.

## 1.12 TRAFFIC CONTROL (SEE ALSO SECTION 02020, TRAFFIC CONTROL)

### A. Notification:

1. One week prior to commencement of Work, notify residents along the Project roadway(s), in writing, that traffic flows may be subject to detours and/or delays, and that access to individual driveways may be disrupted during working hours. Provide City with a copy of the notice for review prior to distribution.
2. At least one week prior to commencement of Work, post the Project area to inform drivers of impending construction Work and likely delays and detours. Provide City with a copy of the notice for review prior to distribution.
3. Notify the property occupants, in writing, at least 3 Days in advance of the trenching across property occupants' driveways. Provide City with a copy of the notice for review prior to distribution.
4. Coordinate vehicular access with other agencies, police, fire, garbage, USPS, etc. at least 3 Days prior to commencement of Work.
5. If any applicable permits require Contractor to notify residents or any organization of traffic detours or delays, provide City a copy of all such notices for review prior to distribution.

### B. Traffic Control Measures:

1. Traffic control and safety precautions shall conform with the CalTrans "Manual of Traffic Safety Controls for Construction and Maintenance Work Zones," all provisions of the City of San Bruno encroachment permit, and with these Specifications.
2. Pay for all costs for traffic signage, including flagging.
3. Provide safe passage for vehicular and pedestrian traffic through the Work at all times.
4. Traffic on two-lane streets may be reduced to one lane provided that, with all restriction of traffic flow, flaggers, cones, signs, and barricades are furnished as required by City. Permit the traffic equal flow time in each direction.
5. Maintain access to public and private buildings, businesses and driveways. Provide approved metal "bridge" or temporary backfill for access when and where required within ½ hour after request by City except that emergency vehicles and personnel shall be provided immediate access at all times.
6. Restore access to all residences for all non-working hours, holidays, and weekends.

### C. Maintain traffic control measures:

1. Maintain traffic control through the Site and provide local access as specified herein regardless of rain or other causes, either within or beyond the control of Contractor, that may force suspension or delay of the Work. At all times keep on the Site such materials, labor forces, and equipment as may be necessary to keep the streets and driveways within the Site open to traffic and in good repair. Expedite the passage of such traffic, using such labor forces and equipment as may be necessary.

## 1.13 NOT USED

## 1.14 STORM WATER POLLUTION PREVENTION PLAN

- A. Prior to commencement of Work at the Site, provide City a Storm Water Pollution Prevention Plan (SWPPP) prepared in accordance with NPDES General Permit No. CAS 000002 (Water Quality Order 99-08-DWQ) issued by the State Water Resources Control Board.
- B. Prepare the SWPPP in accordance with the requirements of Section A of the NPDES General Permit. Develop and implement a monitoring program in accordance with requirements set forth in Section B of the NPDES General Permit to verify compliance with the NPDES General Permit.
- C. Submit SWPPP to City for review in accordance with Section 01330 (Submittal Procedures). The SWPPP shall be reviewed by City prior to commencement of Work at the Site.
- D. The SWPPP shall include a Site map. Geometric equations, notes, details, and all data not related to water pollution control work shall be removed to improve clarity. A copy of the Drawings shall be used as a base sheet with the pertinent stage of construction drawn in as an overlay to accurately reflect Site conditions at various phases of construction.



- E. Revise and update the SWPPP whenever there is a change in construction operations that may affect the Site drainage patterns or discharge of pollutants to surface waters, groundwaters, or a separate municipal storm sewer system.
- F. Failure to fully comply with the requirements of the NPDES General Permit shall subject Contractor to all fines, damages, and job delays incurred due to failure to implement the SWPPP.
- G. A copy of the approved SWPPP, together with updates and revisions, shall be kept at the Site. Contractor shall furnish copies of the SWPPP at the request of City.
- H. At City's option, failure by Contractor to fully comply with the approved SWPPP shall subject the Contractor to a stoppage of work or fines of \$250 per day until compliance as determined by the Engineer is achieved.

**1.15 REMOVAL OF TEMPORARY FACILITIES AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities, and materials prior to final inspection.
- B. Clean and repair damage caused by installation or use of temporary Work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

**PART 2 PRODUCTS – NOT USED**

**PART 3 EXECUTION – NOT USED**

END OF SECTION

**SECTION 01540**

**SITE SECURITY AND SAFETY**

[Supplements Document 00700, Paragraph 16.2.]

**PART 1 GENERAL**

**1.1 SUBMITTALS**

- A. See Section 01330 (Submittal Procedures).
- B. Safety Program.

**1.2 PROTECTION**

- A. Contractor shall continuously maintain protection as necessary to protect the Work, as a whole and in part, and adjacent property and improvements from accidents, injuries or damage.
- B. Contractor shall properly protect the Work:
  - 1. With lights, guard rails, temporary covers or barricades.
  - 2. Enclose excavations with proper barricades.
  - 3. Brace and secure all parts of the Work against storm and accident.
  - 4. Provide such additional forms of protection that may be necessary under existing circumstances.
- C. Contractor shall provide and maintain in good condition all protective measures required to adequately protect the public from hazards resulting from the Work and to exclude unauthorized persons from the Work. When regulated by Building Code, Cal OSHA, or other authority, such legal requirements for protection shall be considered as minimum requirements. Contractor shall be responsible for the protection in excess of such minimum requirements as required.

**1.3 CONTROL OF SITE**

- A. Contractor shall ensure that no alcohol, firearms, weapons, or controlled substance enters or is used at the Site. Contractor shall immediately remove from the Site and terminate the employment of any employee found in violation of this provision.

**1.4 SAFETY PROGRAM**

- A. Prior to starting any Work at the Site, Contractor shall submit a Safety Program that has been reviewed and approved by an Industrial Hygienist certified by the American Board of Industrial Hygiene or a Certified Safety Professional. The Safety Program shall include the name, certification number, and certification seal of the Industrial Hygienist or Certified Safety Professional. Contractor shall comply with the Safety Program and all applicable federal, state, and local regulation codes, rules, law and ordinances.
- B. Receipt and/or review of the Safety Program by City, Project Manager or City's Representative shall not relieve Contractor of any responsibility for complying with all applicable safety regulations.
- C. It is essential that Contractor and each Subcontractor implement an effective and vigorous Safety Program to cover their respective portions of the Work. Subject to Contractor's overall responsibility for Project safety, it shall be understood that the full responsibility for providing a safe place to work with respect to their respective portions of the Work rests with each individual Contractor and Subcontractor.

**D. Safety Program components:**

1. Injury and Illness Prevention Program (IIPP): Conforming to the General Industrial Safety Orders (CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 3203), and the California Labor Code (Section 6401.7).
2. Site-Specific Safety and Health Plan (SSHP): Describing health and safety procedures that shall be implemented during the Work in order to ensure safety of the public and those performing the Work. Follow the guidelines for a SSHP listed in CCR Title 8, Division 1, Chapter 4, Subchapter 7, Section 5192, Item (b)(4) f.

E. The wearing of hard hats shall be mandatory at all times for personnel on Site. Contractor shall supply sufficient hard hats to equip properly all employees and visitors.

F. Whenever an exposure exists, appropriate personal protective equipment (PPE) shall be used by all affected personnel. Contractor shall supply PPE to all personnel under Contractor's direction.

**1.5 SAFETY REQUIREMENTS**

A. Standards: Contractor shall maintain the Project in accordance with state and local safety and insurance standards.

**B. Hazards Control:**

1. Contractor shall store volatile wastes in covered metal containers and remove from premises daily.
2. Contractor shall prevent accumulation of wastes that create hazardous conditions.
3. Contractor shall provide adequate ventilation during use of volatile or noxious substances.

C. Contractor shall conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.

1. Do not burn or bury rubbish or waste material on the Site.
2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
3. Do not dispose of wastes into streams or waterways.

D. Provide accident information on the forms provided by Contractor. This information shall be provided on the same Day as the occurrence of said incident.

**1.6 SITE SAFETY OFFICER**

A. Designate one of Contractor's staff as "Site Safety Officer" whose duties shall include the responsibility for enforcing the environmental protection provisions of the Contract Documents including safety and health, the requirements of the Occupational Safety and Health Act, and other applicable federal, state and local standards. Submit for review by City Contractor's intended Traffic Control Plan(s), Safety Plan, Access Plan. After review by City, the implementation and enforcement of these plans shall become the responsibility of the Site Safety Officer. Any changes in the plans shall be requested by Contractor through the Site Safety Officer for written concurrence by City.

B. City's risk management representative(s) shall be allowed access to accident/injury and illness reports, inspection reports, scheduling and construction meetings, and safety meetings.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

END OF SECTION

**SECTION 01600**

**PRODUCT REQUIREMENTS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Products
- B. Product Options and Substitutions
- C. Product Delivery Requirements
- D. Product Storage and Handling

**1.2 PRODUCTS**

- A. Products: New material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying, and erection of the Work. Products may also include existing materials or components required for reuse.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- C. For similar components, provide interchangeable components of the same manufacturer.

**1.3 PRODUCT OPTIONS AND SUBSTITUTIONS**

**A. Summary:**

- 1. This Paragraph 1.3 describes procedures for selecting products and requesting substitutions of unlisted materials in lieu of materials named in the Specifications or approved for use in Addenda that were not already the subject of a Document 00660 (Substitution Request Form) submittal as provided in Document 00200 (Instructions to Bidders).

**B. Contractor's Options:**

- 1. For products specified only by reference standard: Select any product meeting that standard.
- 2. For products specified by naming one or more products or manufacturers:
  - a. Select products of any named manufacturer meeting Specifications.
  - b. If product becomes unavailable due to no fault of Contractor, submit Request for Substitution (RFS), including all information contained in this Section 01600 and a fully executed Document 00660 (Substitution Request Form), but using the term "Contractor" each place the term "Bidder" appears in that form.

**C. Substitutions:**

- 1. Except as provided in Document 00200 (Instructions to Bidders) with respect to "or Approved Equal" items, City will consider Contractor's substitution requests only when product becomes unavailable due to no fault of Contractor or if the product specified no longer complies with local regulations or laws. Requests for review of proposed substitute items will not be accepted from anyone other than Contractor. The RFS shall state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice Contractor's achievement of Substantial Completion on time, and whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with City for work on the Project).
- 2. Submit separate RFS (and four copies) for each product and support each request with:
  - a. Product identification.

- b. Manufacturer's literature.
  - c. Samples, as applicable.
  - d. Name and address of similar projects on which product has been used, and dates of installation.
  - e. Name, address, and telephone number of manufacturer's representative or sales engineer.
  - f. For construction methods: Detailed description of proposed method; drawings illustrating methods.
3. Where required, itemize a comparison of the proposed substitution with product specified and list significant variations including, but not limited to dimensions, weights, service requirements, and functional differences. If variation from product specified is not pointed out in submittal, variation will be rejected even though submittal was favorably reviewed. Identify all variations of the proposed substitute from that specified in the RFS and indicate available maintenance, repair, and replacement service.
4. State whether the substitute will require a change in any of the Contract Documents (or provisions of any other direct contract with City for work on the Project) to adapt the design of the proposed substitute, and whether or not incorporation or use of the substitute in connection with Work is subject to payment of any license fee or royalty. Submit data relating to changes in construction schedule.
5. Include accurate cost data comparing proposed substitution with product and amount of net change in Contract Sum including, but not limited to, an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by City in evaluating the proposed substitute. City may require Contractor to furnish additional data about the proposed substitute.
6. City will not consider substitutions for acceptance (or, in City's sole discretion, City may make Contractor solely responsible for all resulting costs, expenses and other consequences) when a substitution:
- a. Results in delay meeting construction Milestones or completion dates.
  - b. Is indicated or implied on submittals without formal request from Contractor.
  - c. Is requested directly by Subcontractor or supplier.
  - d. Acceptance will require substantial revision of Contract Documents.
  - e. Disrupts Contractor's job rhythm or ability to perform efficiently.
7. Substitute products shall not be ordered without written acceptance of City.
8. City will determine acceptability of proposed substitutions and reserve right to reject proposals due to insufficient information.
9. Accepted substitutions will be evidenced by a Change Order or a CCD. All Contract Document requirements apply to Work involving substitutions.

D. Contractor's Representation and Warranty:

1. Contractor's RFS constitutes a representation and warranty that Contractor:
  - a. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
  - b. Will provide the same warranty for substitution as for specified product.
  - c. Will coordinate installation and make other changes that may be required for Work to be complete in all respects.
  - d. Waives claims for additional costs which may subsequently become apparent.
  - e. Will compensate City for additional redesign costs associated with substitution.
  - f. Will be responsible for Construction Schedule slippage due to substitution.
  - g. Will be responsible for Construction Schedule delay due to late ordering of available specified products caused by requests for substitution that are subsequently rejected by City.
  - h. Will compensate City for all costs, including extra costs of performing Work under Contract Documents, extra cost to other contractors, and any claims brought against City, caused by late requests for substitutions or late ordering of products.

E. City's Duties:

1. Review Contractor's RFS with reasonable promptness.
2. Notify Contractor in writing of decision to accept or reject requested substitution.

F. Administrative Requirements:

1. Specified products, materials, or systems for Project may include engineering or on-file standards required by the regulatory agency. Contractor's substitution of products, materials or systems may require additional engineering, testing, reviews, approvals, assurances, or other information for compliance with

regulatory agency requirements or both. Provide all agency approvals or other additional information required and pay additional costs for required City services made necessary by the substitution at no increase in Contract Sum or Contract Time, and as a part of substitution proposal.

**1.4 PRODUCT DELIVERY REQUIREMENTS**

- A. Deliver products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

**1.5 PRODUCT STORAGE AND HANDLING**

- A. Store products only in staging area per provisions of Section 01100 (Summary).
- B. Handle, store, and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate-controlled enclosures.
- C. For exterior storage of fabricated products, place on appropriate supports, above ground.
- D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- E. Store loose granular materials on solid flat surfaces in a well-drained area.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

END OF SECTION

**SECTION 01740**

**[SUPPLEMENTS DOCUMENT 00700]**

**CLEANING**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Progress Cleaning
- B. Final Cleaning

**1.2 PROGRESS CLEANING**

- A. Contractor shall perform cleaning to ensure that any streets and other City and public properties are maintained free from accumulation of waste materials, dust, mud, and debris.
  - B. Where required, Contractor shall wet down surfaces to lay dust and prevent the blowing of dust to nearby residences or public properties.
  - C. Contractor shall keep all paved roads clean and free of dust, mud, and debris resulting from Contractor's operations. Daily cleanup throughout the job will be necessary as Contractor progresses with its Work, but extra attention to cleanup shall be made prior to weekends and holidays. Without limiting the foregoing, Contractor shall remove trench spoil along traveled ways daily; grade and vacuum broom surfaces initially where applicable and later water flush with high-pressure sprays, being careful to avoid downstream contamination.
  - D. All dust, mud, spoils, and construction debris shall be removed daily from all roadways, ditches, shoulders, and private property (fills or spoils placed on private property at private property owner's written request excepted).
  - E. Disposal of Materials:
    - 1. All waste materials, debris, and rubbish shall be legally disposed of at sites to be chosen by Contractor in accordance with applicable local, state, and federal regulations.
    - 2. Contractor is cautioned that the City of San Bruno and County of San Mateo have regulations governing the disposal of rubble, broken pavement, and similar materials.
    - 3. Become familiarized with the requirements of the agency having jurisdiction over any contemplated disposal site and shall comply with all such requirements.
  - F. All excess soil from performance of Work shall be legally disposed at sites to be chosen by Contractor in accordance with applicable local, state, and federal regulations. If Contractor elects to dispose of soil on any private property, prior to any dumping, a letter allowing such dumping shall be obtained from the property owner and presented to City. Contractor is advised that the property owner is required to obtain a grading permit from City. In addition, placement of fill in wetland areas is subject to permit procedures of the US Army Corps of Engineers. At the completion of Work, a letter from each affected property owner will be required releasing Contractor, City, and any City consultant from future liability.
  - G. If Contractor does not properly clean the Site, in the opinion of City, then City shall have the option of using outside equipment to perform the cleanup and such cost will be withheld from the Contract Sum.
- 1.3 FINAL CLEANING**
- A. Contractor shall execute final cleaning prior to final inspection, using only properly skilled workers.

- B. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from exposed interior and exterior finished surfaces.
- C. Repair, patch, and touch up marred surfaces to match adjacent finishes.
- D. Clean interior and exterior surfaces exposed to view: remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- E. Clean equipment and fixtures to a sanitary condition, clean or replace filters of mechanical equipment operated during construction, clean ducts, blowers and coils of units operated without filters during construction.
- F. Clean Site.
- G. Mechanically sweep paved areas.
- H. Remove waste and surplus materials, rubbish, and construction facilities from Site.

**PART 2 PRODUCTS – NOT USED**

**PART 3 EXECUTION – NOT USED**

END OF SECTION



**SECTION 01770**

**CONTRACT CLOSEOUT**

**PART 1 GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

**1. Description of Contract closeout procedures including:**

- a. Removal of Temporary Construction Facilities
- b. Substantial Completion
- c. Final Completion
- d. Project Record Documents
- e. Project Guarantee
- f. Warranties
- g. Turn-In
- h. Release of Claims

**1.2 REMOVAL OF TEMPORARY CONSTRUCTION FACILITIES**

- A. Remove temporary materials, equipment, services, and construction prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary facilities.
- C. Restore permanent facilities used during construction to specified condition.
- D. Comply with Paragraph 1.15 of Section 01500 (Temporary Facilities and Controls).

**1.3 SUBSTANTIAL COMPLETION**

- A. When Contractor considers Work or designated portion of the Work as Substantially Complete, submit written notice to City, with list of items remaining to be completed or corrected.
- B. Within reasonable time, City will inspect to determine status of completion.
- C. Should City determine that Work is not Substantially Complete, City will promptly notify Contractor in writing, listing all defects and omissions.
- D. Remedy deficiencies and send a second written notice of Substantial Completion. City will reinspect the Work. If deficiencies previously noted are not corrected on reinspection, then pay the cost of the reinspection.
- E. When City concurs that Work is Substantially Complete, City will issue a Certificate of Substantial Completion, accompanied by Contractor's list of items to be completed or corrected as verified by City.
- F. Manufactured units, equipment and systems that require startup must have been started up and run for periods prescribed by City before a Certificate of Substantial Completion will be issued.
- G. A punch list examination will be performed upon Substantial Completion. One follow-up review of punch list items for each discipline will be provided. If further Site visits are required to review punch list items due to incompleteness of the Work by Contractor, Contractor will reimburse City for costs associated with these visits.

**1.4 FINAL COMPLETION**

- A. Final Completion occurs when Work meets requirements for City's Final Acceptance. When Contractor considers Work is Finally Complete, submit written certification that:

1. Contractor has inspected Work for compliance with Contract Documents, and all requirements for Final Acceptance have been met.
  2. Except for Contractor maintenance after Final Acceptance, Work has been completed in accordance with Contract Documents and deficiencies listed with Certificate of Substantial Completion have been corrected. Equipment and systems have been tested in the presence of City, and are operative.
  3. Work is complete and ready for final inspection.
- B. In addition to submittals required by Contract Documents, provide submittals required by governing authorities and submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
- C. When City finds Work is acceptable and final closeout submittals are complete, City will issue final Change Order reflecting approved adjustments to Contract Sum not previously made by Change Order. Should City determine that Work is incomplete or Defective:
1. City promptly will so notify Contractor, in writing, listing the incomplete or Defective items.
  2. Promptly remedy the deficiencies and notify the City when it is ready for reinspection.
  3. When City determines that the Work is acceptable under the Contract Documents, City will request Contractor to make closeout submittals.
- D. Final adjustments of accounts:

#### 1.5 PROJECT RECORD DOCUMENTS

- A. Contract Documents will not be closed out and final payment will not be made until completion and submittal of Project Record Documents described in Section 01780 (Project Record Documents).

#### 1.6 PROJECT GUARANTEE

- A. Requirements for Contractor's guarantee of completed Work are included in Article 9 of Document 00700 (General Conditions). Guarantee Work done under Contract against failures, leaks, or breaks or other unsatisfactory conditions due to defective equipment, materials, or workmanship, and perform repair work or replacement required, at Contractor's sole expense, for period of one year from date of Final Acceptance.
- B. Neither recordation of Final Acceptance nor final certificate for payment nor provision of the Contract nor partial or entire use or occupancy of premises by City shall constitute acceptance of Work not done in accordance with Contract Documents nor relieve Contractor of liability in respect to express warranties or responsibility for faulty materials or workmanship.
- C. City may make repairs to Defective Work as set forth in Document 00700 (General Conditions), Paragraph 9.3.
- D. If, after installation, operation, or use of materials or equipment to be provided under Contract proves to be unsatisfactory to City, City shall have right to operate and use materials or equipment until said materials and equipment can, without damage to City, be taken out of service for correction or replacement. Period of use of Defective materials or equipment pending correction or replacement shall in no way decrease guarantee period required for acceptable corrected or replaced items of materials or equipment.
- E. Nothing in this Section 01770 shall be construed to limit, relieve, or release Contractor's, Subcontractors', and equipment suppliers' liability to City for damages sustained as result of latent defects in equipment caused by negligence of suppliers' agents, employees, or Subcontractors. Stated in another manner, warranty contained in the Contract Documents shall not amount to, nor shall it be deemed to be, waiver by City of any rights or remedies (or time limits in which to enforce such rights or remedies) it may have for Defective workmanship or Defective materials under laws of this State pertaining to acts of negligence.

## 1.7 WARRANTIES

- A. Execute Contractor's Submittals and assemble warranty documents, and Installation, Operation, and Maintenance Manuals described in Section 01330 (Submittal Procedures), executed or supplied by Subcontractors, suppliers, and manufacturers.
  - 1. Provide table of contents and assemble in 8½ inches by 11 inches three-ring binder with durable plastic cover, appropriately separated and organized.
  - 2. Assemble in Specification Section order.
- B. Submit material prior to final Application for Payment.
  - 1. For equipment put into use with City's permission during construction, submit within 14 Days after first operation.
  - 2. For items of Work delayed materially beyond Date of Substantial Completion, provide updated Submittal within 14 Days after acceptance, listing date of acceptance as start of warranty period.
- C. Warranties are intended to protect City against failure of Work and against deficient, Defective, and faulty materials and workmanship, regardless of sources.
- D. Limitations: Warranties are not intended to cover failures that result from the following:
  - 1. Unusual or abnormal phenomena of the elements
  - 2. Vandalism after Substantial Completion
  - 3. Insurrection or acts of aggression including war
- E. Related Damages and Losses: Remove and replace Work which is damaged as result of Defective Work, or which must be removed and replaced to provide access for correction of warranted Work.
- F. Warranty Reinstatement: After correction of warranted Work, reinstate warranty for corrected Work to date of original warranty expiration or to a date not less than one year after corrected Work was done, whichever is later.
- G. Replacement Cost: Replace or restore failing warranted items without regard to anticipated useful service lives.
- H. Warranty Forms: Submit drafts to City for approval prior to execution. Forms shall not detract from or confuse requirements or interpretations of Contract Documents.
  - 1. Warranty shall be countersigned by manufacturers.
  - 2. Where specified, warranty shall be countersigned by Subcontractors and installers.
- I. Rejection of Warranties: City reserves right to reject unsolicited and coincidental product warranties that detract from or confuse requirements or interpretations of Contract Documents.
- J. Term of Warranties: For materials, equipment, systems, and workmanship, warranty period shall be one year minimum from date of Final Completion of entire Work except where:
  - 1. Detailed Specifications for certain materials, equipment or systems require longer warranty periods.
  - 2. Materials, equipment or systems are put into beneficial use of City prior to Final Completion as agreed to in writing by City.
- K. Warranty of Title: No material, supplies, or equipment for Work under Contract shall be purchased subject to any chattel mortgage, security agreement, or under a conditional sale or other agreement by which an interest therein or any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver premises, together with improvements and appurtenances constructed or placed thereon by Contractor, to City free from any claim, liens, security interest, or charges, and further agrees that neither Contractor nor any person, firm, or corporation furnishing any materials or labor for any Work covered by Contract shall have right

to lien upon premises or improvement or appurtenances thereon. Nothing contained in this paragraph, however, shall defeat or impair right of persons furnishing materials or labor under bond given by Contractor for their protection or any rights under law permitting persons to look to funds due Contractor in hands of City.

**1.8 TURN-IN**

- A. Contract Documents will not be closed out and final payment will not be made until all keys issued to Contractor during prosecution of Work and letters from property owners, pursuant to Paragraph 1.2.F of Document 01740 (Cleaning), are turned in to City.

**1.9 RELEASE OF CLAIMS**

- A. Contract Documents will not be closed out and final payment will not be made until Document 00650 (Agreement and Release of Any and All Claims) is completed and executed by Contractor and City.

**PART 2 PRODUCTS – NOT USED**

**PART 3 EXECUTION – NOT USED**

END OF SECTION

**SECTION 01780**

**PROJECT RECORD DOCUMENTS**

**PART 1 GENERAL**

**1.1 SUMMARY**

**A. Section Includes:**

1. Administrative and procedural requirements for the following Project Record Documents:
  - a. Project Record Drawings, Shop Drawings
  - b. Project Record Specifications
  - c. Project Record Product Data
  - d. Miscellaneous Project Record Submittals

- B. Specific Project Record Documents requirements that expand requirements of this Section may be included in the individual Sections of Division 2.

**1.2 SUBMITTAL**

- A. At completion of Project, Contractor shall deliver Project Record Documents to City. Project Record Documents required include:

1. Marked-up copies of Drawings
2. Marked-up copies of Shop Drawings
3. Marked-up copies of Specifications, Addenda, Change Orders, and CCDs
4. Marked-up Product Data submittals
5. Final set of Project Record Drawings, including electronic version
6. Final set of Project Record Specifications
7. Final set of Project Record Product Data
8. Record Samples
9. Field records for variable and concealed conditions
10. Record information on Work that is recorded only schematically

- B. Contractor shall accompany submittal with transmittal letter containing:

1. Date
2. Project title and City's Contract number
3. Contractor's name and address
4. Number and title of each Project Record Document
5. Certification that each document as submitted is complete and accurate, and signature of Contractor or Contractor's authorized representative.

**1.3 GENERAL**

- A. City will provide one full size blue-line set of Drawings and one copy of the Project Manual for Contractor's use for recording as-built conditions.
- B. Contractor shall post changes and Modifications to the Contract Documents as they occur. Do not wait until the end of the Project. City may periodically review Project Record Documents to assure compliance with this requirement.
- C. Contractor shall refer instances of uncertainty to City for resolution.
- D. Maintenance of Documents and Samples:
  1. Contractor shall store Project Record Documents and Samples in the field office apart from Contract Documents used for construction.
  2. Do not permit Project Record Documents to be used for construction purposes.
  3. Contractor shall maintain Project Record Documents in good order and in a clean, dry, legible condition.

4. Contractor shall make Project Record Documents and Samples available at all times for inspection by City.

#### 1.4 PROJECT RECORD DRAWINGS, SHOP DRAWINGS, AND SAMPLES

- A. Quality Draftsmanship: All Work on Project Record Drawings and Project Record Shop Drawings shall be performed by competent drafters and shall be clear and fully legible. City shall be the sole judge of the acceptability of the Project Record Drawings and Project Record Shop Drawings.
- B. Mark-up Procedure: During the construction period, Contractor shall maintain a set of blueline or blackline prints of Drawings and Shop Drawings for Project Record Documents purposes ("Field Set"). Contractor shall stamp each document (on each sheet or page) "PROJECT RECORD" in 2-inch high letters. Contractor shall also maintain a set of Samples for Project Record Documents purposes. Contractor shall keep record documents current. Note: A reference by number to a Change Order, CCD, RFI, RFQ, RFP, Field Order or other such document is not acceptable as sufficient record information on any record document. Do not permanently conceal any Work until required information has been recorded.
  1. Mark Drawings and Shop Drawings to indicate the actual installation where the installation varies appreciably from the installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later. Items required to be marked include but are not limited to:
    - a. Dimensional changes to the Drawings and Shop Drawings
    - b. Revisions to details shown on the Drawings and Shop Drawings
    - c. Depths of various elements of foundation in relation to main floor level or survey datum
    - d. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements
    - e. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure
    - f. Locations of underground Work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stub outs, invert elevations, and similar items
    - g. Actual numbering and set points of each electrical circuit
    - h. Field changes of dimension and detail
    - i. Revisions to routing of piping and conduits
    - j. Revisions to electrical circuitry
    - k. Actual equipment locations
    - l. Duct, conduit, and cable size and routing
    - m. Changes made by Change Order or CCD
    - n. Details not on original Drawings or Shop Drawings
  2. Mark completely and accurately Drawings or Shop Drawings, whichever is the most capable of showing actual physical conditions. Where Shop Drawings are marked, show cross-reference on Drawings location.
  3. Mark important additional information that was either shown schematically or omitted from original Drawings.
  4. Note CCD numbers; Alternate numbers, Change Order numbers, and similar identification.
  5. Mark Drawing and Shop Drawing sets with red, erasable colored pencil.
  6. Mark Samples to record changes made after review.
  7. Responsibility for Mark-up: Where feasible, the individual or entity who obtained Project Record Drawing or Shop Drawing data, whether the individual or entity is the installer, Subcontractor, or similar entity, is required to prepare the mark-up on Project Record Drawings or Shop Drawings.
    - a. Accurately record information in an understandable and legible drawing technique.
    - b. Record data as soon as possible after it has been obtained. In the case of concealed installations, record and check the mark-up prior to concealment.
- C. Preparation of Project Record Drawings and Project Record Shop Drawings: Immediately prior to inspection for Certification of Substantial Completion, review completed marked-up Project Record Drawings and Project Record Shop Drawings with City. When authorized, prepare final Project Record Drawings and Project Record Shop Drawings.

## 1.5 PROJECT RECORD SPECIFICATIONS

- A. During the construction period, Contractor shall maintain one copy of the Specifications, including Addenda and Modifications issued, for Project Record Documents purposes.
- B. Mark the Project Record Specifications to indicate the actual installation where the installation varies substantially from that indicated in Specifications and Modifications issued. Note related Project Record Drawing information, where applicable. Give particular attention to substitutions, selection of product options, Change Order and CCD Work, and information on concealed installation that would be difficult to identify or measure and record later.
  1. In each Specification Section where products, materials or units of equipment are specified or scheduled, mark the copy with the proprietary name and model number of the product furnished.
  2. Record the name of the manufacturer, catalog number, supplier and installer, and other information necessary to provide a record of selections made and to document coordination with Project Record Product Data submittals and Installation, Operation, and Maintenance Manuals.
  3. Note related Project Record Product Data, where applicable, for each principal product specified, indicate whether Project Record Product Data has been submitted in Installation, Operation, and Maintenance Manuals instead of submitted as Project Record Product Data.
- C. Preparation of Project Record Specifications: Immediately prior to inspection for Certification of Substantial Completion, review completed Field Set Project Record Specifications with City. When authorized, prepare final Project Record Specifications.
  1. After Substantial Completion and before Final Completion, carefully transfer all data shown on the Field Set to a separate clean set of Specifications provided by City. Include the printed designation "PROJECT RECORD SPECIFICATION" in a prominent location on the Specifications.

## 1.6 PROJECT RECORD PRODUCT DATA

- A. During the construction period, maintain one copy of each Product Data submittal for Project Record Document purposes.
  1. Mark Project Record Product Data to indicate the actual product installation where the installation varies substantially from that indicated in Project Record Product Data submitted. Include significant changes in the product delivered to the Site, and changes in manufacturer's instructions and recommendations for installation.
  2. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  3. Note related Change Orders and mark-up of Project Record Drawings, where applicable.
  4. Upon completion of mark-up, submit a complete set of Project Record Product Data to City for City's records.
  5. Where Project Record Product Data is required as part of maintenance manuals, submit marked-up Project Record Product Data as an insert in the manual, instead of submittal as Project Record Product Data.
  6. The Contractor is responsible for mark-up and submittal of Project Record Product Data for the Work.
- B. Material, Equipment, and Finish Data:
  1. Provide data for primary materials, equipment, and finishes as required under each Specification Section.
  2. Submit two sets prior to final inspection, bound in 8-1/2 inches by 11 inches three-ring binders with durable plastic covers; provide typewritten table of contents for each volume.
  3. Arrange by Specification Section number and give names, addresses, and telephone numbers of Subcontractors and suppliers. List:
    - a. Trade names
    - b. Model or type numbers
    - c. Assembly diagrams
    - d. Operating instructions
    - e. Cleaning instructions
    - f. Maintenance instructions
    - g. Recommended spare parts

h. Product data

## **1.7 MISCELLANEOUS PROJECT RECORD SUBMITTALS**

A. Refer to other Specification Sections for miscellaneous record keeping requirements and submittals in connection with various construction activities. Immediately prior to Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for use and reference. Submit to the City for City's records. Categories of requirements resulting in miscellaneous records include, but are not limited to, the following:

1. Field records on excavations and foundations
2. Field records on underground construction and similar Work
3. Survey showing locations and elevations of underground lines
4. Invert elevations of drainage piping
5. Surveys establishing lines and levels
6. Authorized measurements utilizing unit prices or allowances
7. Ambient and substrate condition tests
8. Certifications received in lieu of labels on bulk products
9. Batch mixing and bulk delivery records
10. Testing and qualification of tradespersons
11. Documented qualification of installation firms
12. Load and performance testing
13. Inspections and certifications by governing authorities
14. Leakage and water-penetration tests
15. Final inspection and correction procedures

## **PART 2 PRODUCTS – NOT USED**

## **PART 3 EXECUTION – NOT USED**

END OF SECTION



**DIVISION 2 - TECHNICAL SPECIFICATIONS**

**SECTION 02010**

**MOBILIZATON**

**1.0 General**

Mobilization shall be in accordance with Section 11, "Mobilization" of the Standard Specifications and these Technical Provisions. Work required under this section consists of preparatory work and operations, including, but not limited to those necessary for the movement of personnel, equipment, supplies and incidentals for the work to be performed on the project site, obtaining any necessary licenses and permits, providing required submittals and implementing the approved Storm Water Pollution Prevention Plan (SWPPP).

**END OF SECTION**

## **SECTION 02020**

### **TRAFFIC CONTROL**

#### **1.0 General**

See also paragraph 1.12 of Section 1500, Temporary Facilities and Controls.

Traffic Control shall include furnishing all labor, materials, tools, equipment, and services necessary to provide traffic control measures, signs and devices, in accordance with Section 12 "Construction Area Traffic Control Devices" of the Standard Specifications, the current edition of the California Manual on Uniform Traffic Control Devices (MUTCD) and these Specifications.

The Contractor shall provide for through traffic and ingress and egress to and from all private properties adjacent to the work. A minimum of one traffic lane, not less than 11 feet wide, shall be open in each direction for use by public traffic. However, at times when the quality of workmanship can be improved and a better job obtained by the elimination of the ingress and egress to private property, such access may, upon the approval of the Engineer, be temporarily eliminated.

No work that interferes with public traffic shall occur before 8:00 a.m. nor after 5:00 p.m. except work required under Sections 7-1.08 and 7-1.09 of the Standard Specifications.

The Contractor shall be responsible for adequate barricading of the work area and controlling of traffic in the vicinity of the project.

The Contractor shall be fully responsible for all traffic control devices installed by him.

#### **2.0 Materials**

The City of San Bruno will furnish NO PARKING signs for placement by the Contractor when required. The Contractor shall be responsible to pick up the signs at the City's Public Services Department, Administration & Engineering at 567 El Camino Real, San Bruno.

#### **3.0 Execution**

The Contractor shall submit a Traffic Control Plan(s) to the Engineer for approval, specific to the work to be performed, a minimum of five (5) working days prior to commencing the work.

The Contractor shall implement each approved Traffic Control Plan and shall provide and maintain such flagmen, fences, barriers, signs, guardrails, red lights, or other safety devices adjacent to and on the site, at or near all barriers, and as may be necessary to control traffic and prevent accidents to the public. He shall furnish, place and maintain such lights as may be necessary for illuminating said signs or fences.

In the event a driveway must be closed four (4) hours or more, the Contractor shall notify the resident in writing, three (3) days prior to the closure specifying the date and time of closure, including the estimated time of start and finish. A copy of the written notice shall be provided to the City for review at least 2 working days prior to distribution to the resident.

The approved Traffic Control Plan(s) may be subject to modifications in the field if, in the opinion of the Engineer, public safety may be better served by the modifications.

#### **3.1 No Parking Signs**

The Contractor shall post NO PARKING signs, which will be provided by the City, 72 hours prior to working on roadways. NO PARKING signs shall specify the day(s) work will occur on the roadway. If

the Contractor is delayed and cannot work on the posted date, the Contractor shall remove the signs and re-post them 24 hours prior to the new workday.

Signs and barricades for no parking shall be re-posted/re-dated immediately for any revisions of schedule, including changes caused by inclement weather and shall be removed immediately upon expiration of the dated duration of work.

Signs and barricades for no parking shall be immediately removed upon completion of the associated construction work.

END OF SECTION

## **SECTION 02030**

### **PUBLIC NOTIFICATION**

#### **1.0 General**

Public notification shall consist of providing a project information sign and establishing and implementing a procedure to provide at least two written construction notices (handouts and/or mailings) to affected properties, and door-to-door notification as described below. The Public Notification Plan shall be provided to the Engineer for review and approval prior to implementation and shall include documentation that required noticing has been accomplished.

#### **2.0 Materials**

A copy of all written notices shall be provided to the Engineer for review at least one week prior to handout and/or mailing.

Notifications shall include the type(s) of work, the period the work will last, parking and any ingress/egress impacts, construction times and dates. Notifications shall also include 24-hour contact information for the Contractor and a contact if residents or businesses have question regarding work or if they have special needs that need to be accommodated.

#### **2.1 Written Notifications**

Written notifications shall consist of, at a minimum, a general notice describing the overall project including an outline of the proposed work tasks and a second task-specific notice of the construction that will impact individual residents within the construction area. Should additional tasks impact a property, the Contractor shall provide additional task-specific notice(s) as necessary.

#### **2.2 Project Information Signs**

Contractor shall place a 4'x 8' min. sign facing traffic on the roadway at the beginning and end of the project area at least seven (7) days prior to the start of construction. The signs shall include the project name, start date, Contractor Contact Phone Number, and the City of San Bruno Phone, (650) 616-7065. Lettering shall be 4" min. height and be legible by motorists. Approval of sign by the Engineer is required prior to fabrication and placement.

#### **3.0 Execution**

The Contractor shall provide the general written notice to all residents residing on the project streets and all emergency and garbage/recycle collection services at least four (4) working days, but not more than seven (7) working days prior to start of construction. Work shall be scheduled to avoid interruption of garbage/recycling collection services.

The task-specific notices shall be provided to affected residents a minimum of 48 hours prior to the start of the construction task. On the day before work is to begin, the Contractor shall securely attach a door hanger reminding affected residents of the work, period the specific construction will last, construction time and date of construction, and information regarding access to their property. Any notices remaining on doors the evening of construction completion shall be picked up and disposed of by the Contractor.

**END OF SECTION**

## **SECTION 02040**

### **DEMOLITION**

#### **1.0 General**

Demolition work shall include, but not be limited to, the sawcutting, removal and legal disposal of asphalt concrete pavement section and concrete curbs, gutters, sidewalks and driveways.

Removal of existing concrete shall conform to Section 15-3 "Removing Concrete" of the Standard Specifications.

Contractor attention is directed to the probable existence of reinforcement (either wire mesh or rebar) in the existing concrete driveway at 539 – 7<sup>th</sup> Avenue.

Material removed shall be legally disposed of outside the street right of way in accordance with the provisions of Section 7-1.13 of the Standard Specifications and as specified below.

Broken concrete, asphalt, pavement section, soils, tree roots, earth and all other incidental debris required to be removed will become the property of the Contractor.

The Contractor shall be responsible for locating a suitable dump site and for transporting materials for dumping. When material is to be disposed of at a location other than at the local sanitary landfill site, the Contractor shall obtain written authorization from the property owner on whose property the disposal is to be made and he shall file with the Engineer said authorization together with a written release from the property owner absolving the City from any and all responsibility in connection with the disposal of material on said property. If the dump site is within the City limits, the property owner must obtain a grading permit.

#### **1.1 Protection of Existing Facilities**

Before beginning any cutting or demolition work, the Contractor shall inspect the site and existing facilities and review the Contract Documents to determine the extent of the demolition work. Care shall be taken such that no vibrations which may damage existing facilities and properties are caused by the demolition.

Contractor's attention is directed to the existing curb drains to remain that presently discharge through the curb face into the gutter. Curb drain pipes, water meters, meter boxes and any sprinkler heads and lines located near the areas of work are to remain and shall be protected from damage.

#### **1.2 Repair of Damage**

Any damage to existing facilities to remain, as caused by the Contractor's demolition operations, shall be repaired or replaced at the Contractor's expense.

Damaged items shall be repaired or replaced with new materials as required to restore damaged items or surfaces to a condition equal to or better than what existed prior to the start of this contract.

**2.0 Materials**      Not used.

#### **3.0 Execution**

##### **3.1 General**

Demolition work shall be conducted in a manner that protects against damage to facilities to remain, and that provides necessary protection against injury to the Public, Contractor and City personnel. In general, the Contractor shall address the following:

1.    Potholing to locate existing underground utilities.

2. Protection of existing facilities to remain.
3. Control of noise, shocks and vibration.
4. Control of dust and debris.
5. Access to existing facilities for operation and maintenance by City personnel.
6. Coordination and cooperation with the City, and any other Contractor, particularly with respect to shutdown of existing facilities.
7. Timely and proper disposal of demolition debris.

Wherever utilities have been marked in the proposed excavation or if there is surface evidence of an underground utility, the contractor shall hand dig or vacuum extract to locate the utility. No heavy equipment shall be used for this work.

### 3.2 Saw Cutting and Removal

Where existing sidewalks, curbs, gutters, driveways or asphalt concrete pavement are to be removed, the section of each to be removed will be saw cut to a minimum depth of 4" with an abrasive type saw at the nearest score mark or at locations directed by the Engineer. Where the existing curb, gutter, sidewalk or driveway was poured monolithic and the intended repair is only to the curb and/or gutter, the concrete will be saw cut at the back of curb or as directed by the engineer.

If, during demolition work, any of the concrete or asphalt concrete to remain becomes cracked, chipped or broken it must be saw cut at the nearest score mark or as directed by the Engineer, removed and replaced at the Contractor's expense.

At the locations where the existing asphalt concrete is to be removed, the existing asphalt shall be sawcut a minimum of one foot from the gutter lip or as directed by the Engineer. The asphalt and base rock will be removed to a minimum depth of six inches as shown on the Plans.

At Contractor's option, asphalt concrete at areas of pavement reconstruction may be plane grinded and removed by a cold planning method. Any grinding of the asphalt concrete pavement shall not be done by the heater planning method.

### 3.3 Tree Root Removal

Trees are a valuable asset to the community and as such care must be taken not to cause irreparable damage due to excessive or incorrect root pruning. The amount of time and hand work needed to expose roots to determine the amount of root pruning necessary is left to the discretion of the Engineer. At any time the Engineer can halt the work at any location until the City arborist can be consulted and no additional compensation will be allowed therefor.

Forty-eight (48) hours prior to commencing demolition near or within the dripline of any existing tree, the Contractor shall call Jeff Madonich, City Field Supervisor of Trees & Parks, (650) 616-7194. No tree roots two inches (2") or more in diameter shall be cut unless authorized by the City. Material shall be carefully removed from around root systems to avoid damage thereto. Roots shall be protected with dampened burlap wrapping while exposed.

Any tree root less than two inches (2") in diameter that falls within the excavation shall be completely removed. The root is to be severed completely before any attempt at removal is made. All roots shall be severed from the tree with a clean neat cut. The root is to be cut a minimum of two (2) inches behind the back of excavation or as directed by the Engineer. The Engineer shall be notified before any root two inches in diameter or larger is cut.

### 3.4 Recycling

The contractor shall legally dispose of all waste generated from demolition activities. At least fifty percent (50%) of all waste generated in tonnage shall be diverted from landfill by using recycling, reuse, salvage or

other approved diversion method. Contractor shall manage waste material and maintain records to document the total weight of waste material generated in tonnage and total weight of waste material diverted from landfill. Disposal shall be performed on the same day that waste materials are generated.

Within 10-days of any disposal activity, contractor shall submit documentation to Engineer describing the total weight of waste material generated and total weight of waste material diverted from landfill and calculated percentage of waste diverted from landfill.

### **3.5 Remove Trees**

Trees designated on the Plans for removal under Bid Add Alternate no. 2 shall be confirmed with the Engineer prior to start of any tree removal operations. Any tree and stump removal shall occur prior to the construction of permanent improvements.

Work shall be performed in a safe manner, adhering to CAL-OSHA and ANSI Standards. The work areas shall have appropriate cones and signs for safe vehicle and pedestrian travel. The Contractor shall be responsible for the preservation of all public and private property. All debris and removed tree materials shall be legally disposed of outside the City right-of-way.

Tree stumps and roots shall be removed by grinding to a minimum depth of 18" below finished grade and chemically treated to prevent regrowth. Voids created by stump removal shall be backfilled and compacted to grade with native materials acceptable to the Engineer. Sod shall also be placed on the backfilled areas.

END OF SECTION

## **SECTION 02050**

### **EARTHWORK**

#### **1.0 General**

Earthwork shall conform to the applicable provisions in Section 19, "Earthwork", of the Standard Specifications and these Special Provisions.

Earthwork shall include all excavation, grading and/or backfill associated with the installation of trench drains and appurtenances, sidewalk, curb, gutter and driveway installations, pavement reconstruction, potholing and any overexcavation.

#### **1.1 Job Conditions**

The Contractor shall be responsible for becoming familiar with the site conditions prior to bidding the job. The work area is within the Bay Margin, which is known to contain Bay Mud, loose sand lenses, and a high groundwater table that is affected by tides. For geotechnical reports available for review at the office of the City, see Section 00320, "Geotechnical Data and Existing Conditions."

All excavations shall be kept free from water until such time as water will not be detrimental to the finished work. Unless otherwise specifically permitted by the Engineer, water either of surface or subsurface origin, will not be permitted in the excavations at any time during construction and until backfilling operations have been completed.

#### **1.2 Quality Assurance**

It shall be the responsibility of the Contractor to accomplish the specified compaction for backfill or other earthwork. All testing, retesting, and related inspection tests, shall be contract work with all costs borne by the Contractor. Relative compaction testing shall be performed using California Test Method 216 or 231.

In case the tests show non-compliance with the required density, the Contractor shall replace the backfill and re-compact until compliance is achieved.

Contractor shall submit certificates of compliance from all suppliers of materials specified herein, demonstrating compliance with the requirements of this Section.

#### **1.3 Disposal**

Materials removed from the worksite to accommodate the installation of new facilities shall become the property of the Contractor and shall be legally disposed of outside the road right-of-way. Disposal shall be performed on the same day that waste material is generated. Excavated materials might include Bay Mud, which may not be accepted at some disposal sites.

All excavated materials shall be loaded directly into dump trucks and immediately removed from the job site for disposal by the Contractor. Stockpiling of excavated materials for later removal shall not be allowed. Excavated materials shall not be used for backfill.

#### **1.4 Tree Roots**

Forty-eight (48) hours prior to commencing excavation near or within the root zone of any existing tree, the Contractor shall call Jeff Madonich, City Field Supervisor of Trees & Parks, (650) 616-7194. No tree roots two inches (2") or more in diameter shall be cut unless authorized by the City. Material shall be carefully removed from around root systems to avoid damage thereto. Roots shall be protected with dampened burlap wrapping while exposed.



## **2.0 Materials**

### **2.1 General**

Backfill materials shall be imported. Native materials are considered by the City to be unsuitable backfill materials. Backfill materials shall be defined as follows and shall meet the requirements specified herein:

1. Aggregate Base. Aggregate base shall be used directly beneath asphalt concrete pavement reconstruction, sidewalks, curbs and gutters and driveways.
2. Concrete Surround. Concrete surround shall be used as backfill and support around and under the trench drain channel components.
3. Drain Rock. Drain rock shall be used in any over-excavated areas where the bottom of excavations are unstable, disturbed, or wet.
4. Geotextile Fabric. Geotextile fabric used in conjunction with pavement reconstruction shall be a woven material, placed under and up the sides of the aggregate base material. Any geotextile fabric used in conjunction with overexcavation and placement of drain rock shall be of a non-woven material placed to fully surround the drain rock.
5. Unsuitable Materials. Unsuitable materials shall not be allowed at the bottom of excavations, and shall be over-excavated and replaced with drain rock wrapped in non-woven geotextile fabric. Unsuitable materials shall be determined in the field by the Engineer.

Backfill materials shall be suitable selected or processed clean, fine earth, rock, or sand, free from grass, roots, brush, or other vegetation.

Backfill materials to be placed within 6 inches of any structure or pipe shall be free of rocks or unbroken masses of earth materials having a dimension larger than 1 inch.

Additional materials to bring Pavement Reconstruction areas to grade shall be Aggregate Base.

### **2.2 Aggregate Base**

Aggregate base shall consist of Class 2 Aggregate Base, ¾-inch maximum, meeting the requirements of Standard Specifications, Section 26.

### **2.3 Concrete Surround**

Concrete Surround shall consist of Class B Portland Cement Concrete in conformance with Section 90 of the Standard Specifications and Section 02060 of these Specifications.

### **2.4 Drain Rock**

Drain rock shall be hard, sound and durable, angular gravel and crushed rock conforming to the requirements of Class 2 permeable material, meeting the requirements of Section 68-1.025, "Permeable Material," of the Standard Specifications.

### **2.5 Geotextile Fabric**

#### **2.5A Woven Geotextile Fabric**

Geotextile fabric shall consist of a woven material of polypropylene yarns formed into a stable network, Mirafi HP 570 or approved equal. The fabric shall be permeable, not act as a wicking agent, be inert to commonly encountered chemicals, be rot-proof, and resistant to ultraviolet light and conform to the following physical properties:

Property	Test Value	Test Method
Tensile strength, ultimate	4800 lb/ft (min)	ASTM D4595
Flow rate	30 gal/min/sq. ft. (max)	ASTM D4491
Permeability	0.05 cm/sec (max)	ASTM D4491
Apparent opening size	#30 sieve (max)	ASTM D 4751
Permittivity	0.4/sec (min)	ASTM D4491
UV Resistance	80% (min)	ASTM D4355

## 2.5B Non-Woven Geotextile Fabric

Geotextile fabric shall consist of a non-woven material of polypropylene yarns formed into a stable network, Mirafi 140NC or approved equal. The fabric shall be permeable, not act as a wicking agent, be inert to commonly encountered chemicals, be rot-proof, and resistant to ultraviolet light and conform to the following physical properties:

Property	Test Value	Test Method
Grab tensile strength	100 lb (min)	ASTM D4632
Elongation at break	60% (max)	ASTM D4632
Puncture strength	65 lb (min)	ASTM D4833
Burst strength	210 psi (min)	ASTM D3786
Apparent opening size	#70 (max)	ASTM D 4751
Permittivity	1.8/sec (min)	ASTM D4491
UV Resistance	70% (min)	ASTM D4355

## 2.6 Unsuitable Material

Unsuitable materials shall be as determined in the field by the Engineer.

## 3.0 Execution

### 3.1 General

Excavation shall include the removal of all materials encountered that would interfere with the proper execution and completion of the Work. The excavation shall conform to the lines and grades indicated or ordered by the Engineer. The Contractor shall control and remove any surface or groundwater from the excavation in accordance with the Dewatering portion of this section (paragraph 3.6D). Subgrade shall be compacted to a minimum 90% relative density prior to placement of any backfill materials.

Potholing shall generally consist of excavating to verify locations and elevations of existing underground utility lines and services as shown on the Plans and as directed by the Engineer.

Should any lawn sod or other vegetation removed during any excavation operations not be suitable for replacement in its original location due to Contractor negligence, new sod or other vegetation shall be furnished in kind and placed by the Contractor at the sole expense of the Contractor to the satisfaction of the Engineer. The Engineer shall determine if new sod shall be required.

### 3.2 Excavations

Unless otherwise shown, ordered, or accepted by the Engineer, all excavations shall be vertical walled.

The bottom of the excavation shall be uniform and to the proper grade. All excavations shall be fully backfilled at the end of each day, except for the end of the trench, which shall be covered by heavy steel plates adequately braced and transitioned, capable of supporting vehicular traffic.

### **3.3 Potholing**

Existing underground utility lines and services shall be potholed by hand or vacuum type equipment to verify USA markings prior to excavation. No augers or backhoes shall be utilized in the pothole operations.

Contractor shall schedule potholing work prior to any construction activity. On pavement adjacent to the pothole or on a survey stake, Contractor shall record the depth and type of utility encountered. These notes shall be provided to the Engineer on a daily basis and not less than two working days prior to starting trenching or excavation operations.

It shall be the sole responsibility of the Contractor to determine the exact depth and location of all utility lines and service lines whether shown on the Plans or not.

### **3.4 Over-excavation**

If the bottom of the excavation is found to consist of soft, unstable or unsuitable material that is incapable of providing proper support, the Engineer shall be advised immediately.

The Contractor shall obtain approval from the Engineer prior to over-excavating. Any over-excavating and resultant backfill and compaction without such approval shall be at the Contractor's expense. **The quantity of approved unsuitable material excavated and its replacement shall be paid for under the contingent bid item for Overexcavation, but only with the authorization of the Engineer and in accordance with the Bid Forms.**

**Unit prices for Overexcavation listed in the bid form are exempt from the quantity parameters listed in paragraph 1.4 of Section 01200, Price Payment and Procedures.**

### **3.5 Subgrade Preparation**

Areas to receive backfill shall be at a minimum 90% relative density prior to backfill or paving operations.

Compacted subgrade shall be set to line and grade. Any subgrade material not in conformance with the requirements of these Specifications shall be removed, replaced and recompacted by the Contractor unless the material has been deemed as unsuitable by the Engineer. Minimum depths of removal of unsuitable materials shall be 6" under curbs, gutters, driveways, pavement sections and trench drains and 3" under sidewalks.

### **3.6 Backfill**

#### **3.6A General**

No backfilling shall commence until the subgrade and trench drains have been inspected and approved by the Engineer. In backfilling the trench drain system, the Contractor shall take all necessary precautions to prevent damage or shifting of the drain.

Backfill shall not be dropped directly upon any structure or pipe. Backfill shall not be placed around or upon any structure until the concrete has attained sufficient strength to withstand the loads imposed.

Except for materials being placed in over-excavated areas, backfill shall be placed after all water is removed from the excavation.

Backfill materials shall not be conditioned, mixed, or stored within the public right-of-way. Backfill materials shall be delivered to the work area only as required to accomplish immediate backfilling needs.

Backfilling operations shall be continuous with the progress of the work, and the amount of trench left open at any given time shall be minimized. Excavations within streets shall be topped with temporary or

permanent asphalt each day in accordance with the requirements of the Asphalt Concrete section of these Specifications.

At the end of each working day, if a difference in excess of 1 ½ inches exists along any edge of the areas of construction including conforms or excavations, material shall be placed along the edge of the construction, conform or excavation and tapered at a slope of 1:4 (vertical:horizontal) or flatter. During excavation operations, only cut back material shall be used for this purpose. Full compensation for placing the cut back material, subsequent removal or reshaping of the material to the lines and grades shown on the plans or as directed by the Engineer shall be considered in the contract price paid for the various items of work, and no additional compensation will be allowed therefore.

### 3.6B Placing and Spreading

Backfill materials shall be placed and spread evenly in layers, loose depth 8 inches or less.

Where the backfill material moisture content is too low to permit the specified degree of compaction, water shall be added before or during spreading until the proper moisture content is achieved. Jetting will not be permitted for compaction.

Where the backfill material moisture content is too high to permit the specified degree of compaction, the material shall be dried until the moisture content is satisfactory.

### 3.6C Compaction

Flooding, ponding, or jetting shall not be used.

Compaction Requirements. The following compaction test requirements shall be in accordance with ASTM D1557 or in accordance with ASTM D4253 or D4254 as applicable.

<u>Location or Use of Fill</u>	<u>Minimum Percentage of Maximum Density</u>
Drain rock in over-excavated area	90
Backfill around all structures	90
Aggregate base beneath A/C paving	95
Aggregate base beneath curb, gutters, sidewalks and driveways	95

### 3.6D Dewatering

**Dewatering excavations, when required, will be paid for as extra work and may be accomplished in any manner the Contractor desires, provided the method is acceptable to the Engineer. The Contractor shall prepare and submit a dewatering plan to the Engineer's satisfaction that said method will produce satisfactory results prior to any dewatering work. The Contractor shall demonstrate that adequate equipment, personnel, and materials are provided to dewater the excavations at all locations and times. Any damage resulting from the failure of the chosen method to operate properly shall be the responsibility of the Contractor and shall be repaired in a manner satisfactory to the Engineer, at the Contractor's expense.**

Dewatering for excavations shall commence when groundwater is first encountered, and shall be continuous until such times as water can be allowed to rise in accordance with the provisions of this Section or other requirements. Effluents proposed to be discharged shall only be allowed into the City storm or sanitary sewer system upon Contractor's Dewatering Plan providing for levels of suspended solids and turbidity acceptable to the Engineer.

At all times, site grading shall promote drainage. Surface runoff shall be diverted from excavations.

Dewatering shall at all times be conducted in such a manner as to preserve the undisturbed bearing capacity of the subgrade soils at proposed bottom of excavation.

The Contractor shall maintain the water level below the bottom of excavation in all work areas where groundwater occurs during excavation, construction and backfilling.

The Contractor shall be fully responsible and liable for all damages which may result from failure to adequately keep excavations dewatered.

### **3.6E Cleanup**

Streets shall be cleaned daily by means acceptable to the Engineer.

### **3.7 Measurement and Payment**

Measurement. None.

Payment. Unless otherwise shown or noted, compensation for various earthwork elements shall be considered as included in the various contract prices paid for the applicable bid items and no separate payment will be made.

END OF SECTION

**SECTION 02060**

**PORTLAND CEMENT CONCRETE**

**1.0 General**

Portland cement concrete curbs, gutters, sidewalks, driveways, concrete surrounds for the trench drain and other related types of flatwork, of the forms and dimensions, shown on the plans shall conform to Section 73, "Concrete Curbs and Sidewalks," of the Standard Specifications and these special provisions.

All Portland cement concrete work shall be considered "Minor Concrete" and shall also conform to Sections 51 and 90 of the Standard Specifications. The work in this Section shall include all labor materials, tools, equipment and incidentals, as specified herein or otherwise necessary to complete the whole work in accordance to these specifications, as shown on the Plans and as directed by the Engineer.

Contractor shall submit to the Engineer for review and approval, his concrete mix design(s).

**2.0 Materials**

**2.1 Cement**

All concrete cement shall be Type II Modified in conformance with Section 90 of the Standard Specifications.

**2.2 Concrete Aggregate**

Granular material shall conform to all of the quality requirements as set forth in Section 90 of the Standard Specifications. Combined aggregate grading shall be 1" maximum.

**2.3 Dowels**

Reinforcing steel bar shall conform to Section 52 of the Standard Specifications.

**2.4 Lamp Black**

All concrete used shall have 1 pound of lamp black per cubic yard introduced into the mix at the batching plant.

**3.0 Execution**

**3.1 General**

Curb, gutter and sidewalk installation shall conform to the details on the Plans and these Technical Specifications.

Driveway installation shall conform to the details on the Plans and these Technical Specifications.

Concrete surrounds for trench drains shall conform to the manufacturer's instructions and recommendations, the details shown on the Plans and these Technical Specifications.

Where the installation of curbs, gutters, sidewalks, driveway or curb ramps may adversely affect existing drainage patterns, such areas shall be immediately brought to the Engineer's attention.

Finishes, scorings and textures shall be done to match adjacent existing concrete.

Any existing curb through drains within new curb and gutter shall be protected from damage and shall be re-established within the new curb and gutter.

### **3.2 Forms and Subgrade**

The Engineer shall approve all forms and subgrade before placing the concrete. All subgrade shall be compacted to a relative compaction of 90% for a minimum depth of 0.5 feet. Any concrete poured without approval of the Engineer is subject to rejection. All lumber and debris resulting from the work performed, shall be removed and the site of the work left in a clean condition.

Nails associated with form board installation and removal shall be swept or otherwise removed from the site as necessary to prevent tire damage to the motoring public. Contractor shall be responsible for all tire damage caused to vehicles by nails or other fasteners.

### **3.3 Expansion Joints and Dowels**

Expansion joints shall conform to the details shown on the Plans, Section 73 of the Standard Specifications and the following specifications:

The fourth paragraph of Section 73-1.05, "Curb Construction," of the Standard Specifications is modified by the following:

Expansion joints shall also be constructed at each side of driveways and at intervals not to exceed twenty (20) feet.

The second sentence of the fifth paragraph of Section 73-1.06, "Sidewalk, Gutter Depression, Island Paving, Curb Ramp (Wheelchair Ramp), and Driveway Construction," of the Standard Specifications is modified by the following:

Where curb is not adjacent, expansion joints shall be constructed opposite expansion joints in the separated curb. Where no curb exists, expansion joints shall be constructed at intervals not to exceed twenty (20) feet and at each side of driveways.

Controls joints and scoring shall match adjacent existing curb and gutter or shall be as directed by the Engineer. The new back of curb shall match the existing concrete driveways or walkways. Minor adjustments of the height of curb and slope of the gutter may be required to conform to adjacent grades.

Expansion joints for trench drain surround shall align with joints in the trench drain components. Joint filler material shall be capped by a waterproof joint sealant material.

All new Portland Cement Concrete (PCC) improvements including the concrete trench drain surround shall be doweled to existing PCC improvements as directed by the Engineer using six inch (6") long No. 4 rebar or as directed by the Engineer.

### **3.4 Curing**

New concrete shall be sprayed uniformly with a clear curing compound. The material, method, and rate of application shall conform to Section 90-7.01B, "Curing Compound Method," of the State Specifications using any non-pigmented compound listed.

### **3.5 Protection and Acceptance**

The Contractor shall protect the newly placed concrete from damage and disfiguration. Damaged and/or disfigured areas shall be refinished or replaced at the direction of the Engineer. The method of refinishing must be approved by the Engineer.

Acceptance of the finished product will be the decision of the Engineer and his decision shall be final.

The finished surfaces of all concrete installed shall be free from humps, sags, and other irregularities.

New concrete that is cracked shall be removed and replaced at the direction of the Engineer. Patching of the crack is not allowed. Any crack not marked for removal shall be reviewed prior to the end of the one year warranty period, and at that time a final decision on whether or not to replace it will be made.

END OF SECTION



## SECTION 02070

### ASPHALT CONCRETE

#### 1.0 General

All Asphalt Concrete work and materials shall conform to the provisions in Section 39, "Asphalt Concrete", of the Standard Specifications and these Special Provisions.

The work shall include placing asphalt concrete at conforms adjacent to new curb, gutter, driveway or concrete surrounds, and placing asphalt concrete at areas of pavement reconstruction, as shown on the plans, as specified herein and as otherwise necessary so that the whole work is completed in accordance with the Contract Documents.

The Contractor shall submit a current (less than one year old) asphalt concrete mix design from two separate sources (primary source and backup source) for asphalt concrete proposed to be used. The asphalt concrete mix design shall have an air void ratio of 3% -5%. Contractor shall allow ten (10) calendar days for City's review of mix design.

#### 2.0 Materials

##### 2.1 Asphalt Concrete

Asphalt concrete shall be Type A with performance graded (PG) asphalt binder of PG 64-10 per Section 92, "Asphalts," of the Standard Specifications. All surface course asphalt concrete (defined as the top 3" of the pavement section) shall have 1/2 inch maximum aggregate, medium grading. At Contractor's option, base course asphalt concrete (defined as all asphaltic concrete below the surface course) shall be either 1/2 inch maximum aggregate or 3/4 inch maximum aggregate, both medium grading.

##### 2.2 Tack Coat

Tack coat shall be SS-1h grade asphaltic emulsion per Section 94, "Asphaltic Emulsions," of the Standard Specifications diluted with water.

##### 2.3 Prime Coat

Prime coat shall be liquid asphalt conforming to the requirements of Section 93, "Liquid Asphalts," of the Standard Specifications. Unless otherwise specified, liquid asphalt for prime coat shall be Grade SC-70.

#### 3.0 Execution

Areas to receive asphalt concrete shall be cleared of all debris, trash, asphalt, vegetation and loose material and shall be graded to a smooth and even surface and compacted to 95% relative density by mechanical methods.

Tack coat shall be furnished and shall be applied to all vertical surfaces of existing curbs, gutters, and concrete surround backfill, and to those areas designated by the Engineer prior to placing a new asphalt surfacing adjacent to them. No greater area shall be treated in any one day than will be covered by the asphalt concrete during the same day.

Prime coat shall be applied to an asphalt concrete pavement or aggregate base to be surfaced. The area to which prime coat has been applied shall be closed to public traffic.

Care shall be taken to avoid tracking binder materials onto existing concrete and asphalt pavement surfaces beyond the limits of construction. The contractor shall be responsible for cleaning any binder material tracked onto existing surfaces and/or vehicles.

Placing of asphalt concrete adjacent to the lips of gutters or concrete surround trench backfill shall be such that a rise above of 1/4 inch shall remain after compaction.

Asphalt concrete paving for pavement reconstruction shall commence within two calendar days after initial excavation and shall be performed and completed on weekdays only.

Asphalt concrete pavement shall be compacted to a relative density of at least ninety-five percent (95%) as determined by the Test Methods No. California 216 or 231. Testing shall be the responsibility of the Contractor who will promptly submit the test results to the Engineer.

The completed surface shall be thoroughly compacted, smooth, and true to grade and cross section, free from ruts, humps, depressions or irregularities and shall conform to the smoothness tolerances stipulated in Section 39-6.03 of the Standard Specifications. The thickness of the finished pavement shall not be less than the planned thickness at any point.

END OF SECTION

**SECTION 02080****TRENCH DRAIN SYSTEM****1.0 General**

This specification is for a modular precast polymer concrete trench drain system generally comprised of pre-sloped and neutral channel segments. Contractor shall prepare and provide a submittal of the proposed system including vertical profile, components and details for review and approval by the Engineer. Any changes in material or design of the approved product will require written approval from the Engineer.

The trench drain system is intended to convey rain water from the roadway. The system shall be installed flush to grade and be designed for installation in paved traffic ways. System components shall generally consist of connected channels with full radius bottoms, integrally cast frames, grates and appurtenances and shall include sloped, non-sloping neutral and outfall components plus appurtenances. Components shall also be designed with a means of engagement into the adjacent concrete surround. All components of the system shall be from one manufacturer.

**1.1 Design Criteria**

The trench drain system shall be designed and installed to meet the following minimum criteria:

- Minimum capacity of 350 gallons per minute (gpm) flow (equal to 0.78 cubic feet per second, cfs) through a minimum 6" diameter circular outfall into the existing storm draininlets.
- Trench drain channels shall have an approximately 4" throat opening. Approximate depth range as measured from grate to flowline shall range between 4" to 12".
- A profile presenting the general design intent is shown on the Plans. A submittal detailing component layout plan and profile shall be provided by Contractor for review and approval by the Engineer.

**2.0 Materials****2.1 Manufacturers**

The City believes the following manufacturers are capable of producing products that will satisfy the requirements of this specification section. This statement, however, shall not be construed as an endorsement of a particular manufacturer's products, nor shall it be construed that named manufacturer's standard equipment will comply with the requirements of this section. Candidate manufacturers include ACO (K100S Klassik Drain), Polycast (600 Series), MultiDrain (Alfa Channel) or approved equal.

Materials are specified by brand names to establish a standard quality, or by performance requirements and general description of product. The Engineer will consider substitutions for brand names of products specified, provided the procedures set forth for substitutions are followed. The Engineer reserves the right to reject any product which, in his opinion, will not meet the requirements specified herein.

**2.2 Channels**

Channel units shall be comprised of polymer concrete with a minimum compressive strength of 12,000 pounds per square inch (psi) with minimum flexural strength of 3,000 psi when tested in accordance with ASTM C579 and C78 respectively. Water absorption rate of the polymer concrete shall not exceed 0.1% by weight.

Sidewall extensions will not be allowed.

Male and/or female end caps and outfall piping shall be provided where required. Each type of end cap shall be available with a removable diaphragm for flow through applications. Transition pieces shall be available and installed where necessary.

### **2.3 Grates and Frames**

Grate and frame assemblies shall be ADA compliant, resistant to entry of high-heeled shoes and bicycle tires and have lockdown bolts. Grate assemblies shall be made of steel (ASTM A-36), ductile iron (ASTM A-536) or gray iron (ASTM A-48) and meet AASHTO HS-20 load requirements. Frames shall be non-removable from the concrete. Grates shall be removable and have lockdowns that do not impede water flow in the channel.

### **2.4 Backfill**

Concrete surround materials shall meet the requirements of Section 02060, Portland Cement Concrete, of these Technical Specifications.

### **3.0 Execution**

#### **3.1 General**

Trench drain system shall be fit and installed per manufacturer's instructions and recommendations including angled and mitered alignments and connections of outlet pipes to the existing storm drain inlets.

The finished product shall also conform to the approved submittal and provide for a fully functional in-place system.

Contractor shall be responsible for horizontal and vertical layout as necessary to construct approved trench drain system.

Horizontal alignment of the installed trench drain system shall be consistently linear in plan view with no deviations from a straight line except at alignment changes shown on the Plans.

During construction, debris shall not be deposited into the City storm drain system.

#### **3.2 Excavation and Backfill**

The excavations shall allow for the placement of concrete on both sides and the bottom of the trench drain for the concrete surround thickness shown on the Plans.

Transverse joints in the concrete surround shall align with joints in the trench drain channels and shall conform to Section 02060, Portland Cement Concrete of these Specifications. Longitudinal joints in the concrete surround shall conform to Section 02060, Portland Cement Concrete of these Specifications.

Concrete surround shall be placed in the trench in a manner that will not disturb the properly aligned trench drain system. Provisions shall be made to prevent drain channels from "floating" during placement of concrete surround. There shall be no air pockets in the concrete surround.

The finished level of the concrete surround shall be sloped on each side of the trench drain to provide positive flow into the trench drain system. The finished surface shall be free from humps, sags, and other irregularities. The finished surface texture shall match existing adjacent concrete.

#### **3.3 Protection and Cleanup**

Upon completion of installation, clean and remove any debris and concrete spillage from within and adjacent to the trench drain system and within the storm drain inlet outfalls.

Installed trench drains shall be water tested in the presence of the Engineer prior to acceptance to verify that water will adequately flow along the flow line of the trench drain system.

END OF SECTION